Aero

Southern FLIGHT

Including MODERN AIRPORTS

DECEMBER 1950

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MOONEY M-18C SINGLE-SEATER

NOW for 1951...A NEW FINER, FASTER PACER

with sensational new DURACLAD finish

THESE FINE FEATURES EXPLAIN WHY THE PACER LEADS IN VALUE

DURACLAD FINISH. Butyrate plastic base gives rugged, nonflammable, long-lasting outer covering over welded steel fuselage and aluminum wing structure —the lightest, strongest type of construction. Can't be equalled for low-cost maintenance.

CABIN COMFORT. You fly in restful comfort because of added soundproofing, adjustable front seat, finger-tip hot- or cold-temperature control, and special windshield which absorbs ultraviolet rays. Front and rear doors, new finer upholstery material, two-tone styling, and ash trays are standard.

NEW BEAUTY. You'll recognize the '51 Pacer instantly by its striking new styling. Standard color is Polar Gray with Tennessee Red trim. Other colors optional.

REAL CROSS-COUNTRY PERFORMANCE. "125" Pacer has 125-horsepower engine, cruises better than 120 m.p.h. "135" Pacer has same engine with controllable propeller, cruises better than 130 m.p.h. at 5,000 ft. on 75% power.

Ever see a dream flying? You will in the new, fast, beautiful 1951 Piper Pacer. It's the finest plane ever built by Piper—world's largest builder of farm, business and personal planes —finer by far than last year's Pacer, which outsold any other four-passenger plane.

The new 1951 Pacer gives you added speed, a quieter, roomier cabin, new styling and beauty, and the sensational *nonflammable longer-lasting Duraclad finish* now standard on all 1951 Piper models.

All these improvements make the 125-horsepower Pacer more than ever an extraordinary cross-country airplane. With better than two-mile-a-minute cruise, over 5 hour range, sensational climb performance and a solid big-airplane feel, the Pacer outpaces all but the most expensive executive aircraft.

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Now more than ever an airplane is a business necessity; now more than ever the Pacer is the plane for you.

See your Piper dealer for a demonstration or write for colorful Pacer brochure to Piper Aircraft Corporation, Lock Haven, Pennsylvania – Dept. SF-12.

PIPER AIRCRAFT CORP. LOCK HAVEN, PA.

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FORWARD WITH
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MAGNOLIA PETROLEUM COMPANY

Allison "501" Turbo-Prop engines fit in nacelles of present commercial transports.

A new kind of Air Travel is in the making

New military engine—soon to undergo first tests in civilian transport—promises smoother, faster, quieter, more pleasant air travel

WITHIN a short time the first American commercial airliner powered by turbine engines will be delivered to the Allison Division of General Motors.

The power plants in this Convair are the new Allison Model "501" Turbo-Props—commercial version of the Navy T38 engine. They are geared to new-type propellers especially designed and built for high-engine-power characteristics by the Aeroproducts Division of General Motors.

The "501" is lighter, smaller, smoother and quieter than any other propeller-type engine of equal horsepower. It develops 2,750 horsepower and weighs only 1,250 pounds!

As soon as this experimental Turbo-Prop transport is received, General Motors-Allison engineers will start putting it through a comprehensive series of flight tests.

In cooperation with the airlines it will be flown under all types of operating conditions—in all kinds of weather. It will be given the works, checked and rechecked many times over, until all its performance characteristics are definitely evaluated.

Such an all-out test program may take a year or more. But it will be well worth it, in view of the fact that present military experience indicates that Turbo-Prop power should bring the following benefits to commercial aviation:

Smoother, quieter operation—for more comfortable travel; also lower maintenance and overhaul costs.

Ability to use low-cost, low-octane fuels, without increased consumption.

Faster speed — up to maximum limit permitted by airframe design.

Very low engine weight—less than half —increasing range or pay load.

Much improved take-off and climb—permitting use of shorter runways, with greater safety and better schedules.

Usable in present aircraft — no costly modifications in changing over to turbine power.

When General Motors is satisfied with its tests of these engines and they are approved for commercial use by the C.A.A., it will be possible to convert present airliners to smoother turbine power without further delay — giving America very high-speed, low-cost, regular airline service.

The development of the Allison Turbo-Prop engine, America's first axial flow propeller-type turbine engine, together with Aeroproducts Propellers, is another example of General Motors progress—and who serves progress, serves the nation.

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"MORE AND BETTER THINGS FOR MORE PEOPLE"

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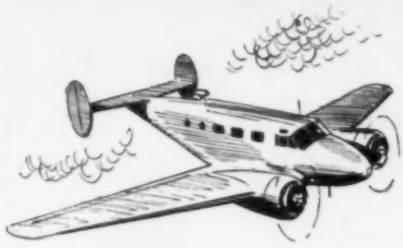
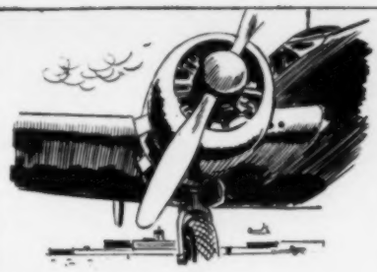


Choose it for speed and performance. With a maximum speed of 230 mph, you're in a class with the Airlines — and you have unsurpassed mobility of action, too.



Choose it for safety. Twin-engine reliability and outstanding single-engine performance provide an assurance of mental ease when flying in less favorable weather conditions.

Choose it because it has proved itself. Wartime versions rolled up hundreds of millions of miles. Today, more than 500 postwar Beech "Twins" are serving leading industries.

For the ultimate in air transportation choose the Beechcraft Executive Transport

Features place the Model D18S in a class by itself

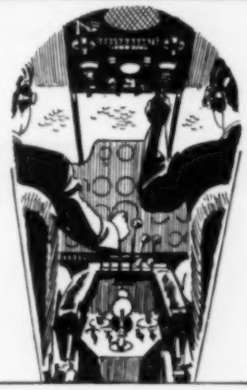
200-mph cruising speed
Rate of climb at sea level, 1,200 feet per minute
Range up to 900 miles
20,500-foot service ceiling
Custom seating arrangement for 7, 8, or 9
Luxurious, temperature-controlled interior
Individual reading lights, ash trays, etc.

● For full information contact your nearest Beechcraft distributor or write on your company letterhead today to Beech Aircraft Corporation, Wichita, Kansas, U.S.A.

Beechcraft
EXECUTIVE TRANSPORT

BEECHCRAFTS ARE THE AIR FLEET OF AMERICAN BUSINESS

Choose it for luxury. Several custom-interior plans available. Sound-proofed cabin, restful seats, wide windows. You'll feel no travel fatigue here!



And it's the choice of pilots. Extremely efficient instrument and control layout, with major operating units conveniently located on central pedestal.

Sooner than you think
. . . big Boeing Strato-freighters should be hustling through the sky at lower costs per ton mile, thanks to efficient turbo-prop horsepower.
BOEING

Sooner than you think **YOU'LL BE**

FLYING WITH PHILLIPS 66 TURBO-PROP FUELS

The Wright "Typhoon" T-35 Turbo-Prop Engine has been extensively flight-tested in the nose of a specially modified Boeing B-17 Flying Fortress.

PHILLIPS is ready today to begin fueling the new turbo-prop transports that promise such significant increases in speed, range, payload and overall operating economy.

You see, our turbine fuel program is well established as a part of our intensive development of aviation fuels and lubricants for all types of engines.

For reliable new aviation fuels or dependable present-day gasoline and aviation engine oils, call on Phillips first. The Aviation Department, Phillips Petroleum Company, Bartlesville, Oklahoma.

Phillips 66

AVIATION PRODUCTS

AIR Report

Significant Trends and News

CAA AND CAB HAVE ADOPTED PROCEDURES FOR OBTAINING CIVIL AIRCRAFT AND PARTS in the face of shortages resulting from increasing military demands on the industry. CAA Administrator Don Nyrop says details of these procedures are now in regional offices, to which applicants for aircraft and parts should make requests. After assisting applicants and screening their requests, regional offices will forward them to CAA and CAB in Washington which will act as "claimant agencies" before the Secretary of Commerce and ask for "directives" from the National Production Authority authorizing deliveries by manufacturers. CAB will handle requests for whole airplanes, for use by scheduled and non-scheduled air carriers, and CAA for all other civil air industry such as fixed-base operators, executive aircraft, private flying and industrial flying activities. Both agencies will negotiate with the military in programming necessary materials for manufacture. Department of Defense cooperation has been assured.

NO MORE LUSCOMBES OR SWIFTS will be produced after those on hand at the Luscombe factory in Dallas are delivered, say Luscombe and Temco in announcing indefinite suspension of civil aircraft production. Plant space is needed for work on Convair B-36 subcontracts just issued to Luscombe. Spare parts service will be continued, however. Last month Ryan announced temporary suspension of Navion after current orders are delivered. Earlier, Ercoupe production was discontinued. Both Navion and Ercoupe suspensions were effected so facilities could be used for defense orders.

"YOUR AIRPLANE MAY SOON BE GROUNDED because of lack of some small part which cannot be supplied because of the manufacturer's inability to obtain raw material for its fabrication," warns Beech Aircraft Corp., in letters to owners and distributors. They were urged to write to Congressmen emphasizing the need for continued civil aircraft manufacture to maintain civil aviation as a vital air power resource. Vice President and General Manager Jack Gaty of Beech, who wrote the letters, said: "Beechcraft has a backlog of over $50,000,000 worth of business and most of it is military, but we are going to do everything in our power to preserve the personal aircraft business in all of its phases. We are firmly convinced that it is an essential military asset of the country, which proved itself in the last war and in the present war situation."

CESSNA'S USAF ORDER FOR LIAISON AIRPLANES HAS BEEN DOUBLED, as predicted in this column two months ago. Doubling was announced on Nov. 22 by Dwane Wallace, Cessna president. Original order, received in June, was for 400-odd L-19's, powered by new Continental 213-hp. engine. This has now been increased to about 900 airplanes.

BRITISH AIRCRAFT SALES EFFORTS IN U. S. will be pressed as result of CAA's decision to accept British airworthiness certificates. Major sales push is being launched by DeHavilland to place its twin-engine, tricycle Dove among executive aircraft owners and local service airlines. A distributor for Doves in the South has already been established—he is Jack Riley, Navion dealer in Shreveport, who was to receive his first Dove demonstrator last month and whose first Dove sale was to an East Texas oil operator. Dove parts and accessories will be stocked at Shreveport's Downtown Airport, with factory-trained mechanics offering service to Dove purchasers. Competing with the Twin Beechcraft, the Dove is priced below the D-18S.

SERIOUS SHORTAGES are cutting into volume of aircraft sales and service operators throughout the country. Factories such as Ryan and Temco-Luscombe which are suspending civil aircraft production merely substitute defense contracts for civilian orders. But operators in the field face serious problems when left with nothing to sell. One Navion distributor attempted a quick move to buy a quantity of new Lycoming 260 engines, but Lycoming told him on the phone that only one engine could be shipped on a schedule—no promise could be made on future shipments. Radio sales have been well established, but shortages in tubes and other parts are now cutting

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Southern FLIGHT including MODERN AIRPORTS

DECEMBER, 1950 VOL. 34, No. 6

COVER shows the new 1951 Mooney M-18C single-seater, powered by a 65-hp. Continental engine. Al Mooney, designer and vice president of Mooney Aircraft, Inc., of Wichita, Kansas, says new squared-off wing tips have improved the airplane's performance, which includes 130-mph. cruising speed at less than 1 cent per mile for gas and oil. Cockpit comfort has been improved. Mooney has delivered about 100 of the single-seaters.
—(SOUTHERN FLIGHT Photo by E. H. Pickering.)

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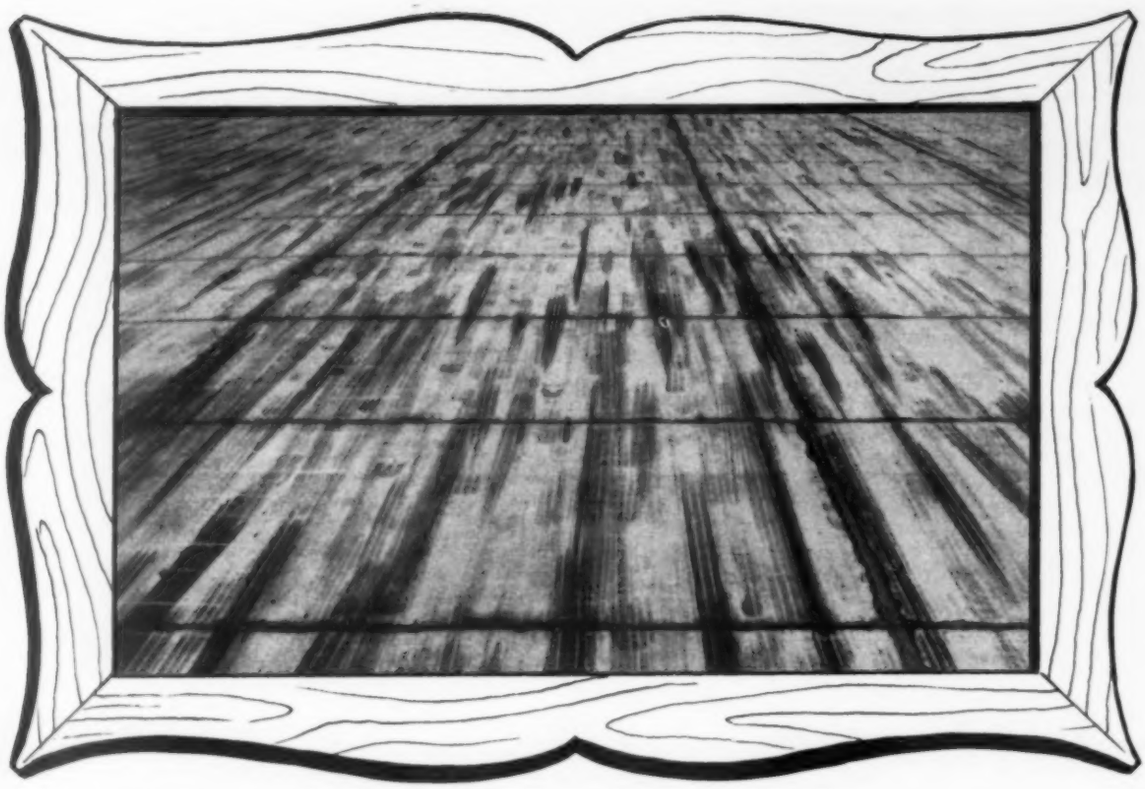

Portrait of 137,000 Happy Landings

This is the North-South Runway at Love Field, marked with the "footprints" of an estimated 137,000 aircraft which have touched-down on this concrete strip since its creation seven years ago.

This, too, is a symbol of the popularity of Southwest Airmotive, because 35,000 of the landings which caused these marks were made for the express purpose of bringing planes and people to SAC from all of the 48 states and from throughout the Western Hemisphere.

In the New Year to come, SAC customers will add another 5,000 endorsements to this unique testimonial . . . to the finest welcome and the "superest" service in private aviation.

To these airmen and to these aircraft—comprising the largest aggregate clientele in the fixed-base industry — and to all who fly the American Way, we wish the MERRIEST of CHRISTMASES and the HAPPIEST of LANDINGS in 1951!

Representing
RCA and ARC

Southwest Airmotive Co.

CAA Approved Repair Station No. 195 | **LOVE FIELD, DALLAS**

Just among ourselves

EDITORIALS

MILITARY NEGLECT IS CRIPPLING CIVIL AIR POWER

ONE of the toughest nuts to crack during the interim between now and the National Security Resources Board Air Transport Mobilization Survey Report (scheduled for completion in February) is acceptance in high military and government agency quarters of the proposition that all civil aircraft, both airline and non-airline, are vitally essential to the war effort and that the pitifully small amount of material needed to guarantee orderly production of planes, parts and accessories can not possibly, by any stretch of the imagination, rob any other industry or defense orders of scarce materials. It just isn't logical to compare civil aviation with the railroads, which have a special allocation of steel for 10,000 new freight cars per month or with the military airframe manufacturers whose aluminum requirements are fantastic compared with the piddling amount needed for an uninterrupted flow of essential civil aircraft and parts.

Official recognition of this peculiar situation by the military establishment and the National Production Authority must come at once if chaos is to be averted.

So far there hasn't been the slightest indication that the responsible authorities recognize the fact that our civil aircraft industry is one of the few in the nation not operating at an all time peak boom of civilian demand as in the case of automobiles, refrigerators and television sets. There is not one other case in the domestic economic structure any way similar to so much depending on so little material. One only has to think of the major corporations and industrial organizations, the operators of agricultural aircraft and the farmers, government contractors and business executives whose airplanes are as vital to their operations and the nation's defense as the truck, freight car, machine tool or telephone.

That the situation is critical and will become even more so can be seen in two recent decisions by manufacturers to suspend civil aircraft production. The first airplane thus affected was the Ercoupe. Facilities and components for its manufacture were moved out of the plant so that management could utilize the space for defense projects. Following this, Ryan Aeronautical announced no more civil Navion production after approximately 150 airplanes already in the works were delivered—it would then suspend this production until defense orders were filled and out of the way.

Under the circumstances, such decisions are difficult to question. If two manufacturers become convinced that (a) they can no longer depend on an orderly flow of necessary supplies such as engines, carburetors, aluminum extrusions and skin and the like and (b) the military demands that they replace civil aircraft production with defense projects, what hope is there for other manufacturers to continue production?

Suppliers tend to become arbitrary in their allocations of materials. Unless a buyer submits a "DO" (for defense order), he is bluntly refused. This is happening despite the fact that no official government priority ratings cover the situation. One "DO" is as good as any other "DO," it seems, regardless of the degree of need or its relationship with defense and industrial essentiality. This, then, is a twilight period, a proposition of everybody for himself with confusion unlimited. It continues only because of official neglect to act.

Why doesn't the military, especially the Air Force, recognize the need for civil aviation's protection and continuance? Civil aviation has gone to bat many times in behalf of air power. But when the going gets tough, the drum beaters within and outside our ranks march off and leave non-airline civil aviation undefended and exposed to the creeping paralysis of neglect and arbitrary rationing of materials. Non-airline civil aviation has proved itself a tremendous air power resource and a national asset in many respects. Its mobilization in an emergency is clearly necessary in the public interest. But airplanes without carburetors or crankshafts or tires can never patrol against submarines, provide emergency community communications and transportation in time of disaster or expedite essential industrial or agricultural production. So why all the commotion over mobilizing civil aviation's resources when supplies essential to mobilization are shut off through arbitrary and unrealistic rationing by cashiers, shipping clerks and others blind to anything except a "DO"?

CAA and CAB leadership, who are the claimant agencies for civil aviation, including the air transport industry, have worked arduously to plead the case. Yet the crippling paralysis continues. It's high time the military lend a hand and force the issue. Otherwise, chaos is inevitable.

THE LINE'S ALWAYS BUSY IN BAD WEATHER

IMPROVEMENTS in reporting and forecasting have been offset by poor telephone facilities at most U. S. Weather Bureau offices. When the weather is good, which is most of the time, the Weather Bureau is a quiet, calm place. But let the fronts start moving and conditions deteriorate, and the facilities become so burdened that it frequently loses its usefulness to a large segment of the public, especially those who fly.

How many times have you attempted again and again and again to complete a telephone call for weather information when you needed it most —only to get a busy signal at each attempt? It's been that way for years —when you need the line, it's always

(Continued on page 42)

1870...Trail Drivers
1950...Sky Riders

For eighty years Abilene has been a favorite stopping place for traveling Texans.

In 1870 trail drivers stopped here to restock supplies and regroup their herds for the drive northward to cattle markets. In 1950 — flyers stop on cross-country flights to refuel and service their planes.

Abilene's location makes it a naturally convenient stop on flights from Dallas and Shreveport to El Paso; but that's just one reason for the popularity of the Abilene Air Terminal.

Two more reasons are — Humble-Esso Aviation Products and the good service offered by Glen Meeks, friendly and efficient terminal manager.

Like many another experienced airport manager, Mr. Meeks has found that flyers come back again and again where they find Humble-Esso Products. They like the quality of these fine products — they like the brand of service they get at Humble-Esso outlets. Make Abilene a stop-off on your next cross-country—sample Mr. Meeks' service and fill up with Humble-Esso Aviation Products — *first with flyers in Texas.*

HUMBLE

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AVIATION PRODUCTS

HUMBLE OIL & REFINING COMPANY

Pan American Airways Stratocruiser
COST PER HOUR
$550.00

Training in Flight in
The Boeing Stratocruiser

Bring training costs down to Earth

▶ **$150,000.00 *saved* in the training of 56 Stratocruiser crews**
. . . A 60 Percent *reduction* in overall training *costs*
. . . In-flight training time *cut* from 21 to 8 hours per crew.
PLUS . . . more thorough training and better crew coordination.

Curtiss-Wright-Dehmel Simulator
COST PER HOUR
$30.00

Training on the Ground in
The Curtiss-Wright-Dehmel Simulator

▶ That is the 18 months' record of Pan American World Airways . . . with a Curtiss-Wright-Dehmel Electronic Flight Simulator!

▶ The same superior results obtained by Pan American are available to all airline and military organizations. By Curtiss-Wright-Dehmel methods, the characteristics of *any type of aircraft* can be simulated realistically *on the ground* . . . where crews may practice problems, too dangerous to create in flight, over and over again until coordinated response to emergencies becomes automatic.

▶ No longer is it necessary for the Armed Forces to delay training until the delivery of new tactical types . . . or to tie-up operational aircraft for instruction. With Curtiss-Wright-Dehmel Flight Simulators, crews may be *pre-trained* . . . and periodically checked for proficiency . . . on the ground . . . at lower cost . . . with greater ease . . . and in larger numbers.

For data on Curtiss-Wright-Dehmel Simulators write Propeller Division, Curtiss-Wright Corporation, Caldwell, N. J., on your company letterhead.

CURTISS WRIGHT

PIONEER PARACHUTES give new troop mobility and supply line efficiency to the U.S. Armed Forces. In Exercise Swarmer, parachutes produced by Pioneer dropped thousands of fully equipped paratroopers and tons of supplies and fighting equipment when and where necessary . . . safely and efficiently. Pioneer was chosen to manufacture the cargo 'chutes used in this massive, successful air exercise because Pioneer has a special department for the manufacture of cargo 'chutes and its "know how" and manufacturing facilities could be depended upon. Pioneer makes a parachute for every purpose . . . from eight feet to 150 feet in diameter . . . for cargo as heavy as a cannon or an air-sea rescue boat to cargo as precious and fragile as life-giving plasma.

PIONEER PARACHUTE COMPANY, INC.

MANCHESTER, CONNECTICUT, U. S. A.

CABLE ADDRESS: PIPAR, Manchester, Conn., U. S. A. TELEPHONE: Manchester 4157

Southwest Factory Branch, Love Field, Dallas, Texas

RAIN—by any other name, would still be a pain in the windshield if a certain distinguished Canadian doctor hadn't recently come up with a remarkable new compound, called FC-10, that will be on the market any day now.

FC-10, *an invisible rain-repellent wax*, can be applied to a plane's windshield in about fifteen minutes, and one application will last from a week to two months, depending on the care and preparation of the windshield.

There's a compound for glass, another for plexiglass. Either sheds rain like water off the proverbial duck's back, assuring high visibility at speeds ranging from 600 down to 50 miles per.

No matter how you slice it, this is a real boon, especially to planes without windshield wipers.

BUT NOW—A PLAY!

(The scene is that junk heap out behind Hangar 5. A worn-out valve and a beat-up piston ring are discussing their misspent lives)

VALVE: Look at it this way, Ferdie! If I had my life to live over again, I'd never touch a drop of anything but Gulfpride Aviation Oil—Series D!

RING: Same here! It was just rotten luck I learned too late that Gulfpride Aviation Oil—Series D—is the finest detergent dispersant oil for horizontally opposed engines there is!

VALVE: Pilots are like that! They never forget how to do an outside loop, but how many of 'em remember about the only aviation oil put through Gulf's exclusive Alchlor process to remove carbon and sludge formers?

RING: You can say that again! And besides, Gulfpride Aviation Oil—Series D—increases those periods between overhauls up to 100%! Ah, well, better luck next incarnation —what?

GULF

AVIATION PRODUCTS

GIVE THE GUY AHEAD PLENTY OF ROOM TO LAND OR..
YOU MAY END UP AS HIS CO-PILOT AND WASTE SOME OF THAT....
SUPERPOWERFUL GULF AVIATION GASOLINE!
GULF

Gulf Oil Corporation . . . Gulf Refining Company

The new Model PA-20 Pacers are distinguished in appearance by a new paint striping style and a new finish with higher gloss. Door on left is for rear seat. Front seat occupants use forward door on right side. —(Piper Photo.)

Piper's New Pacers for 1951

THREE new models of the popular 4-place Piper Pacer have been readied for 1951, offering increased performance, additional horsepower, a better exterior finish and refinements in other details.

Unique in the new line will be a tricycle version of the Pacer. This one will not be available, however, until next Spring, in contrast to the Models 125 and 135, which were to be available this month. The tricycle version will carry a higher price, which has not been listed, than the conventional models, which start at $4,295. A prototype with fixed nose wheel has been flying for several months. Details have not been announced.

Both of the conventional models for 1951 are equipped with the 4-cylinder Lycoming O-290-D engine, rated at 125 hp. at 2,600 rpm. The 115-hp. Lycoming previously available in the predecessor Pacer model has not been included in the new line, due to overwhelming preference for the larger engine. The Lycoming's "cross-over" exhaust system provides quick acceleration on take-off, employing the exhaust from one cylinder to scavenge the exhaust from another and thus giving the equivalent of about seven more horsepower on take-off.

A glance at the accompanying factory specifications and performance data shows both the Pacer 125 and Pacer 135 to be almost identical, their differences being the 135's heavier empty weight (by 20 lbs.), higher cruising speed (134 mph. at 5,000 ft. vs. 125 mph. at sea level), and higher ceiling (by 1,250 ft.). This is explained by Piper as follows:

"Performance figures given for the 125 model are for an airplane equipped with slowest turning fixed-pitch wooden propeller, at gross weight and under standard conditions; those for the 135 model are for either the Aeromatic or Sensenich controllable pitch propeller under standard conditions." The 135 also has a manifold pressure and outside air temperature gauge for selection of the most effective power settings.

Improved streamlining of struts, fuselage and landing gear has paid off in the new model with an increase of 4 mph. in cruising speed at sea level. A Piper survey of 1950 Pacer owners showed an average cruising speed of 121.9 mph. Another "dividend" from streamlining improvements is a better rate of climb, now at 850 fpm. With 36-gal. fuel capacity in two wing tanks, range is 580 miles.

But the most significant improvement in the new line, according to Piper, is a new plastic-like Duraclad finish, described as being "non-flammable" and having "extreme resiliency and toughness." Longer life for the finish is claimed, and the high-gloss adds a distinctive quality to Piper's new colors, which are Polar Gray for wings and fuselage, with Tennessee Red nose cowl and double tapered stripe alongside the fuselage.

The 1951 model retains the Pacer's basic 1,800-lb. gross load with an empty weight of 970 lbs. (990 for the "135") and useful load of 830 lbs. Landing speed at sea level and gross weight is 48 mph. with the use of flaps.

Dual wheel controls are provided, with toe-type hydraulic brakes on the left side. The flap handle is located on the floor between the seats while the stabilizer control, which has been re-engineered to give positive control, is located in the cabin roof.

Improved cabin comfort results from better soundproofing with generous amounts of material beneath the floor boards and the use of automotive-type sound deadener on the fuselage cowl and firewall to insulate noise and reduce rumbling. Passenger and pilot comfort is provided by springs in the seats, with well-upholstered seat backs and cushions. The front seat is adjustable over a range of five inches and when moved forward also raises upward for shorter people. Two-tone interior styling in gray and tan features a new upholstery material, with leather scuff patches where wear is greatest. A floor carpet is provided. Ash trays are furnished for both front and rear seats, and glove compartments are installed at either end of the instrument panel.

Standard electrical equipment includes starter, generator and battery. Position and landing lights are available as optional equipment. Float-type gasoline gauges which formerly protruded in the airstream have been replaced by electrical gauges on the instrument panel.

One of the Pacer's most popular

(Continued on page 39)

PIPER MODEL PA-20 PACER

(Figures given for the Pacer 125 are for an airplane with slowest turning fixed-pitch wooden propeller, at gross weight and under standard conditions. Those for Pacer 135 are for an airplane with either Aeromatic or Sensenich controllable pitch propeller under standard conditions. Source: Piper Aircraft Corp., Nov. 20, 1950.)

Specifications	Pacer 125	Pacer 135
Engine Make and Model	Lyc. O-290-D	Same
Propeller	Fixed Pitch	Var. Pitch
Horsepower and rpm.	125 at 2,600	Same
Gross Weight, lbs.	1,800	Same
Empty Weight, lbs.	970	990
Useful Load, lbs.	830	810
Span, ft.	29.3	Same
Wing Area, sq. ft.	147.5	Same
Length, ft.	20.4	Same
Height, ins.	74.5	Same
Power Loading, lbs./hp.	14.4	Same
Wing Loading, lbs./sq. ft.	12.2	Same
Baggage Capacity, lbs.	50	Same
Fuel Capacity, gals.	36	Same
Performance		
Top Speed, mph.	135	Same
Cruising Speed, mph. (sea level)	125	*134
Stalling Speed, mph. (with flaps)	48	Same
Rate of Climb, fpm.	810	850
Best Rate-of-Climb Speed, mph.	84	Same
Cruising Range, miles	580	Same
Absolute Ceiling, ft.	16,250	17,500
Service Ceiling, ft.	14,250	15,500
Fuel Consumption, gals./hr.	7.7	7.7

*5,000 ft. @ 75 per cent power

In the air, the new Pacers are said to be slightly faster than the 1950 model, being advertised for 125-mph. cruising as compared with an average of 121.9 mph. reported in a survey of 1950 owners. Fuel capacity of 36 gals. is good for more than 500-mi. range. —(Piper Photo.)

The California Plan

Mobilizing civil air power for maximum utilization in an emergency

NUMEROUS state aeronautics commissions and departments are developing civil air defense plans. They seek in advance of an emergency to avoid unnecessary curbs and regulations which might cripple or destroy civil air resources. They undertake to chart steps by which maximum utilization of non-air carrier civil aviation will be available consistent with military requirements and security control.

Planning on the national level by the Civil Aeronautics Administration's Aviation Development Advisory Committee and aviation organizations is well along and is now closely co-ordinated with the National Security Resources Board and the armed forces. But the key to the over-all effectiveness of civil air resources is local and state planning for operations during an emergency.

The first state civil air defense plan to be completed is the California Plan, submitted by that state's aeronautics commission to the governor. A critical defense area, California has about 10,000 civil aircraft and 70,000 certificated pilots. Maximum utilization of these resources in an emergency is charted in a simple and practical outline of steps to be taken jointly by the California Aeronautics Commission, the Civil Aeronautics Administration, the armed forces and state and local agencies.

Compliance with the plan by airport and aircraft owners and operators will be largely voluntary as a "condition to the rights of continued operations which it provides," emphasized Warren E. Carey, California director of aeronautics. "For the first time," he commented in announcing the plan, "the private flier has a basis for believing that by meeting specific requirements and demonstrating wholehearted co-operation he will be permitted to carry on his business or essential personal flying. California has one-tenth of the nation's civil aviation resources and we have taken the initiative to assure that this potential of transportation and communication facilities is not lost to the defense effort through unnecessarily drastic curtailment."

Carey's remarks neatly sum up the major ingredients of the California Plan: (1) Maximum utilization of civil aviation, (2) establishment of specific requirements for flight and (3) voluntary co-operation by airports, airmen and others in aviation. Keep these three items in mind when the details of the undertaking are being considered.

The California Plan fixes the responsibility for providing control and security safeguards, which must be maintained if civil air operations are to be permitted. Thus the state will be prepared to offer civil air resources on a practical basis to the military, instead of waiting for the military to restrict or prohibit civil air operations.

Three progressive emergency conditions are provided for: "Condition One," in which a national emergency is anticipated but has not been declared, such as at present; "Condition Two," a declared emergency; and "Condition Three," active war resulting either from enemy attack or declaration.

Detailed procedure is outlined for each of the three emergency conditions. Two kinds of "action" are involved. One is "planning action," which formulates plans so that they may be implemented without delay when necessary. The other is "action required," this being distinguished from the former in that it "includes such action by the appropriate governmental agencies as may be necessary to fully implement those items of planning action which have been determined to be necessary under the then existing conditions." In this connection, the California Plan specifies that any directive affecting flight operations of civil aircraft will be issued through the CAA whenever possible.

In reality, the California Plan is three dovetailing plans—one for Condition One, another for Condition Two and a third for Condition Three. Most of the planning action is outlined in that for Condition One, since it anticipates and prepares for Conditions Two and Three. The latter contain most of the "action required" processes.

Here's how the three phases of the California Plan for non-air carrier civil aviation unfold:

CONDITION ONE

A. The Assumption.

National emergency not declared, but anticipated.

B. The Objective.

Maximum permissible use of civil aircraft and aviation facilities in the performance of normal peacetime flying activities.

C. Planning Action.

1. GENERAL. a. Encourage use of flight plans by all pilots as means of familiarizing such procedures. b. Encourage installation of two-way VHF radio in all civil aircraft which may be used in cross-country flight or within "sensitive" military areas. c. Encourage maintenance of pilot certificates in effective status. d. Encourage all airmen to obtain FCC licenses permitting use of aircraft transmitters. e. Encourage training and practice in navigation, meteorology, cross-country flying and simulated disaster and search missions primarily at local level. f. Encourage adequate maintenance and current certification of airworthiness of all aircraft. g. Arrange police authority so appropriate airport personnel, if later necessary, can enforce provisions of this plan.

2. AIRMEN. a. Identification of certificated pilots to provide highest degree of assurance that airmen exercising privileges of their certificates can not jeopardize the internal security of the U. S. A pilot identification card should be issued to all airmen based on acceptable proof of: Positive identification, place and date of birth,

citizenship and loyalty pledge. Such identification cards should be similar to CAA Form ACA 935, as revised 15 September 1942, and include fingerprints, photograph, full name, signature and description of pilot. b. Certificated ground personnel and all airport personnel should have identification similar to that of pilots.

3. AIRCRAFT. Owners should be required to register their aircraft with the manager of the Control Airport to which they are assigned.

4. AIRPORTS. All airports and other landing areas will be classified into three groups: Master Control Airports, Control Airports and Other landing areas. A communications network should be established which will provide for the dissemination of necessary directives and pertinent information, as follows: a. From responsible governmental agencies to CAA. b. CAA to its Airways Communication System including Master Control Airports. c. Master Control Airports to aircraft owners based thereon and to Control Airports assigned. d. Control Airports to aircraft owners based thereon and to other landing areas assigned. e. Other landing areas to aircraft owners based thereon.

Master Control Airport is a control airport which has, in addition to minimum prerequisites for a Control Airport, a CAA 24-hr. communications station or CAA 24-hr. airport traffic control tower. Operational procedures for Master Control Airports should be established by the California Aeronautics Commission. Master Control Airports, because of the communications facilities available, will be used as a means of rapid dissemination of directives as necessary. Responsibilities of the Manager of a Master Control Airport include, in addition to those of the Manager of a Control Airport, the following: (a) The establishment of a working arrangement with CAA communications personnel or CAA airport traffic control tower personnel, for the relay of such information to him as may be required by this plan for further dissemination to the Control Airports assigned to him.

Control Airport is the basic unit and must meet the following essential prerequisites: (a) telephone, (b) suitable office for safe-keeping of records and display of maps, notices and maintenance of an airport register, (c) available qualified personnel, (d) 24-hr. aircraft security, (e) radio facilities, (f) visual or radio facilities for recalling local aircraft in flight. Operational procedures for Control Airports should be established by the California Aeronautics Commission. Control Airports will have important functions to perform and it is essential that national uniformity be accomplished. Following adoption, immediate circularization of the uniform national Control Airport operational procedures to interested agencies and to industry should be made.

It is implicitly stated that ALL airports meeting the criteria for a Control Airport should be granted such designation upon application and that selection should not be based on any considerations other than those related to their ability to meet the requirements outlined.

Responsibilities of the Manager of a Control Airport include: (a) Maintenance of an airport register, (b) maintenance of suitable charts, directories and other data to assure proper pilot briefing concerning location of restricted areas and other security requirements in connection with the proposed flights of outbound aircraft, (c) maintain records of aircraft and owners as required, (d) post or comply with all applicable security directives.

All Other Landing Areas. Aircraft movements at all other landing areas will be under supervision of the Control Airport to which the aircraft concerned are assigned.

D. Action Required.

1. GENERAL. The California Aeronautics Commission shall implement or cause to be implemented that part of the communications network as set forth in Planning Action, C 4 Condition One (above), which has not already been established.

2. AIRMEN. Immediate action shall be taken by CAA to establish and implement necessary procedures for the identification of all certificated pilots, ground and air personnel, in accordance with planning action set forth under Section C, 2 Condition One. Such identification should NOT be made a prerequisite to the maintenance and operation of aircraft by properly certificated personnel under Condition One.

3. AIRCRAFT. Immediate action shall be taken by the California Aeronautics Commission to establish and implement the necessary procedures to assure a current and continuing registration of all aircraft with the Manager of the Control Airport to which their base airports are assigned.

4. AIRPORTS. a. Immediate action shall be taken by the California Aeronautics Commission with full regard to the needs of the armed forces, to effect the classification and assignment of all airports and landing areas within the state in accordance with the planning action set forth in C, 4, Condition One. b. The California Aeronautics Commission shall conduct simulated drills on the communications network to determine its adequacy to perform the functions for which it is designed.

CONDITION TWO

A. Assumption.

Declaration of emergency.

B. Objective.

Maximum permissible use of civil aircraft and aviation facilities consistent with the primary mission of the armed forces to prevent enemy attack.

C. Planning Action.

1. GENERAL. a. Review and emphasize Planning Action, Condition One. b. Plan details for liaison with disaster agencies in anticipation of future needs under Condition Three.

2. AIRMEN. Review and emphasize Planning Action, Condition One.

3. AIRCRAFT. Review and emphasize Planning Action, Condition One.

4. AIRPORTS. Review and emphasize Planning Action, Condition One.

D. Action Required.

1. GENERAL. a. CAA shall implement requirements for mandatory flight plans, including special air traffic rules, for all cross-country flights or flights within sensitive areas including the operation of agricultural aircraft and other special categories. b. All local airport authorities shall implement police authority for their airport personnel to assure enforcement and aircraft security. c. The California Aeronautics Commission shall establish necessary liaison with disaster agencies and pilot group organizations.

2. AIRMEN. CAA shall implement requirements for mandatory identification of pilots as a prerequisite to flight activities and of all aviation ground personnel and airport ground personnel in the performance of their normal aviation duties. b. The California Aeronautics Commission shall arrange for conduct of simulated disaster, search and rescue missions with cognizant authority, primarily at the local level.

3. AIRCRAFT. The California Aeronautics Commission shall implement requirements for the registration of aircraft as provided in Condition One.

4. AIRPORTS. The California Aeronautics Commission shall implement the airport operational procedures established under Condition One

(Continued on page 33)

Always on the Go

What utilization means in

By BOB WEMPLE

JUST to run a check on how much transportation there is in a private airplane, we have been making notes on the use of the one we fly. A review of six months of use gives a fair idea of what "aircraft utilization" actually means to a business man.

The airplane we fly belongs to Bob Fletcher, Texas independent oil operator. He bought it last spring. Although he once owned a 2-pl. airplane and flew himself, he bought this one

MAY, 1950

B-35 Bonanza N5005C; Pilot, Bob Wemple
No. Trips, 15
Miles Flown, 7,078
Hrs. Flown, 43:55 Min.
Av. Trip Length, 471.8 miles, 2 hrs. 54 min.
No. Nights Away From Home, 16

May 3
Dallas to Louisville, 4 hrs. 10 mins.

May 5
Louisville to Lexington to Louisville, 1 hr. 5 mins.

May 8
Louisville to Jackson to Dallas, (around weather) 6 hrs.

May 13
Dallas to Waco to Georgetown to Dallas, 3 hrs.

May 14
Dallas to Ardmore to Okmulgee to Healdton to Ardmore, 2 hrs. 40 mins.

May 15
Ardmore to Duncan, 20 mins.

May 17
Duncan to Oklahoma City to Ada to Dallas, 3 hrs. 20 mins.

May 19
Dallas to Ada to Dallas, 1 hr. 50 mins.

May 20
Dallas to Kansas City to Rochester, Minn., 4 hrs. 55 mins.

May 21
Rochester to Omaha to Dallas to Houston to Dallas, 8 hrs. 50 mins.

May 23
Dallas to Duncan, 50 mins.

May 25
Duncan to Dallas, 1 hr.

May 27
Dallas to Duncan to Oklahoma City to Dallas, 2 hrs. 35 mins.

May 30
Dallas to Okmulgee to Oklahoma City, 2 hrs.

May 31
Oklahoma City to Ada to Duncan, 1 hr. 20 mins.

the business flying of an oil man's Bonanza, as told by his pilot

strictly for transportation. He flies from City "A" to City "B," period. Although he used to be a private pilot, he doesn't do any personal flying any more, leaving that chore up to us. In fact, he doesn't even hold the wheel.

So you can get an idea of the travel we accomplish in our airplane, we have compiled our trips into handy little monthly tables appearing with this article. Take a look and you'll see what we mean by "transportation."

For example, we are averaging about 15 trips per month. This means flying somewhere on an average of every other day, which is a lot of flying.

It also means spending about 16 nights a month away from home. Ninety-nine per cent of these trips are for business purposes. There have been occasional pleasure trips, but a busy oil operator seldom finds time to devote to all-pleasure junkets. When we're not so busy, the airplane is the No. 1 choice for pleasure transportation and we hope to make more use of it for this purpose.

At the rate we're going, we will log about 600 hours of business transportation this year. We have averaged 48 hrs. 55 mins. per month for the first six months.

But it is mileage, not hours, that counts. We are covering 7,785 miles per month on an average, the total for six months being 46,528 miles in 292 hrs. 55 mins.

Most of this mileage results from the fact that we can average very good ground-to-ground speed in our airplane. In other words, we can make quite a few trips in a limited period of time. By actual experience, our ground-to-ground speed has averaged 158.88 mph. This is measured from time off the ground to the time we are back on the ground at our destination, and takes into consideration time to climb, traffic delays, and winds encountered in making 90 trips in six months. At cruising altitude, we average 168 mph., this being the six-month average.

In an 8-hr. day of flying, we know from actual experience that we can average 1,270 miles. That is practical air transportation. We have done it time and again, and the fact that we can do it with dependability and in comfort has a lot to do with our scheduling of trips. Thus speed contributes heavily to our utilization of the airplane. If it lacked 20 per cent of its speed, I doubt that we could travel half as much as we actually do.

On the other hand, we would probably cover much more mileage if we could travel 15 or 20 per cent faster. But it doesn't look as if we will be able to do that. A 15 per cent increase in speed can be obtained at present

JUNE, 1950

B-35 Bonanza N5005C; Pilot, Bob Wemple
No. Trips, 13
Miles Flown, 5,244
Hours Flown, 33
Av. Trip Length, 403.31 miles, 2 hrs. 32 mins.
No. Nights Away From Home, 22

June 1
Duncan to Dallas, 55 mins.

June 4
Dallas to Ada to Dallas, 1 hr. 50 mins.

June 5
Dallas to Memphis to Cincinnati to Columbus (stopped by weather) 6 hrs. 15 mins.

June 6
Columbus to Washington (solo) 1 hr. 55 mins.

June 7
Washington to New York, 1 hr. 25 mins.

June 7
New York to Reading, 45 mins.

June 8
Reading to Pittsburgh to Reading to New York, 3 hrs. 25 mins.

June 11
New York to Pittsburgh, 2 hrs. 10 mins.

June 20
Pittsburgh to New York, 1 hr. 55 mins.

June 23
New York to Pittsburgh, 2 hrs. 20 mins.

June 24
Pittsburgh to Owensboro to Little Rock to Dallas, 8 hrs. 35 mins.

June 27
Dallas to Sherman to Dallas, 35 mins.

June 30
Dallas to Sherman to Oklahoma City to Dallas, 2 hrs. 55 mins.

JULY, 1950

B-35 Bonanza, N5005C; Pilot, Bob Wemple
No. Trips, 11
Miles Flown, 5,866
Hours Flown, 36:55
Av. Trip Length, 533.21 miles; 3 hrs. 22 mins.
No. Nights Away From Home, 11

July 4
Dallas to Houston to Dallas, 2 hrs. 55 mins.

July 6
Dallas to Oklahoma City, 1 hr. 25 mins.

July 7
Oklahoma City to Dallas, 1 hr. 15 mins.

July 15
Dallas to Paducah to Pittsburgh, 6 hrs. 10 mins.

July 19
Pittsburgh to Ocean City, N. J,. to Pittsburgh, 4 hrs.

July 20
Pittsburgh to Columbus, 1 hr. 10 mins.

July 21
Columbus to Paducah to Little Rock to Dallas, 7 hrs. 5 mins.

July 23
Dallas to Sherman to Dallas, 45 mins.

July 27
Dallas to Oklahoma City to Dallas, 2 hrs. 30 mins.

July 29
Dallas to Hobbs, N. M., to Dallas, 4 hrs. 45 mins.

July 31
Dallas to Hobbs to Dallas, 4 hrs. 55 mins.

AUGUST, 1950

B-35 Bonanza N5005C; Pilot, Bob Wemple
No. Trips, 15
Miles Flown, 11,784
Hours Flown, 74:10
Av. Trip Length, 786 miles; 4 hrs. 54 mins.
No. Nights Away From Home, 15

August 1
Dallas to Wink to Phoenix, 6 hrs. 45 mins.

August 3
Phoenix to El Paso to Dallas, 6 hrs. 5 mins.

August 7
Dallas to Meridian to Orlando to Miami, 8 hrs. 5 mins.

August 8
Miami to Ocala to Gulfport, 5 hrs. 35 mins.

August 9
Gulfport to Dallas, 3 hrs. 15 mins.

August 11
Dallas to Hobbs to Dallas, 4 hrs. 40 mins.

August 15
Dallas to Midland to Dallas, 4 hrs. 5 mins.

August 17
Dallas to Meridian to Orlando, 6 hrs. 55 mins.

August 18
Orlando to Miami, 1 hr. 40 mins.

August 21
Miami to Tallahassee to Monroe to Dallas, 8 hrs. 30 mins.

August 25
Dallas to Waco to Dallas, 1 hr. 5 mins.

August 26
Dallas to Duncan to Dallas, 2 hrs. 30 mins.

August 27
Dallas to Coleman to Dallas, 2 hrs. 30 mins.

August 30
Dallas to Montgomery to Charlotte, 7 hrs. 35 mins.

August 31
Charlotte to Wildwood to Ocean City to Pittsburgh, 4 hrs. 55 mins.

only by buying a much larger airplane, and this would increase our investment about 700 per cent. This just isn't practical, especially when our needs at the present time are considered. There may come a time and an airplane to change this situation. But right now we're pretty happy with what we have and our utilization can be accepted as proof of what we mean.

Ours is proving to be a surprisingly economical airplane for the high speed it provides. For example, we are averaging about 17 miles to the gallon of gas. This fuel consumption compares very favorably with that of autos, but is even more impressive in view of the fact that our average speed is four times as fast as the auto's. However, we don't like to compare the airplane we use with an auto. In the first place, we would never attempt to cover as much distance in an auto. We value our health and safety too much. An auto driven over the distances we have covered in 46,000 miles of flying in six months would be well worn, to say the least. But our airplane still operates "as good as new," showing very little wear and tear.

There are needs for multi-engine airplanes which our single-engine aircraft can not fill. Carrying capacity is one such need. Flying the weather is another. Business flying, it must be admitted, will never become 100 per cent satisfactory until all trips can be started and completed regardless of weather conditions. However, it surprises us how our single-engine airplane piles up the mileage with satisfactory carrying capacity and trip completions despite the weather.

Our average payload consists of the writer as pilot, two passengers and about 170 lbs. of baggage. Additional carrying capacity would merely serve to contribute more roominess and comfort. There have been a few occasions when we could have used a couple more seats or more baggage capacity or more cruising range, but not frequently enough to make this a factor. As for range, our average trip length is about 510 miles in distance and 3 hrs. 15 mins. in duration, for which our fuel supply is generally adequate.

To be sure, the weather is a handicap. But it has not proved to be as serious as it might appear. In 90 trips during our first six months, the weather kept us from completing only three of them, once we were on our way. One of these was completed by our passenger on a scheduled airline, and two were completed on railroad trains (these would have continued on by airline, but the airlines had also cancelled out their flights because of the weather). In each case, we followed along the next day in the airplane (solo) when the weather lifted sufficiently to continue. As for trips not scheduled because of the weather, these totaled 3 in six months.

That's a pretty good average for a single-engine airplane. However, there were other weather influences which cancellations fail to reflect. On several flights, for example, we were forced to fly out of our way to go around the weather. This had the effect of lengthening both the mileage and the time aloft. But the big point is that we completed the trips. The additional mileage proved to be insignificant—probably not over 600 miles in six months, or less than 2 per cent of the total mileage flown during the period.

We could probably reduce this "detouring" business a little. But we don't intend to. To us, aviation is transportation and we intend to keep it that way by eliminating as many risks as we can recognize. Now and then we note where somebody goes on top of the weather in a single-engine airplane to avoid going the long way around. If conditions are both ideal and convenient, we don't mind going on top. But we have to see our way out of an emergency first.

Some years ago we were in a hurry and filed an instrument flight plan out of Jackson, Mississippi, for Dallas via Monroe and Shreveport, which were giving 600 ft. with 4 miles visibility and 900 ft. with 6 miles, respectively. This represented a narrow belt of overcast across our route, with the tops at 2,000 ft. and with conditions improving. But over Monroe we got an observation and learned that instead of improving, the ceiling there had lowered to 100 ft. with only one-eighth-mile visibility. However, Shreveport

(Continued on page 39)

SEPTEMBER, 1950

B-35 Bonanza N5005C; Pilot, Bob Wemple
No. Trips, 16
Miles Flown, 6,726
Hours Flown, 42:20
Av. Trip Length, 420 miles; 2 hrs. 37 mins.
No. Nights Away From Home, 16

September 4
Pittsburgh to Ocean City, 1 hr. 40 mins.

September 5
Ocean City to Reading to New York, 1 hr. 40 mins.

September 6
New York to Reading to New York, 1 hr. 20 mins.

September 8
New York to Reading to New York, 1 hr. 20 mins.

September 9
New York to Harrisburg (stopped by weather) 1 hr. 10 mins.

September 11
Harrisburg to Pittsburgh (solo), 1 hr. 15 mins.

September 14
Pittsburgh to Paducah to Little Rock (stopped by weather), 5 hr. 40 mins.

September 16
Little Rock to Little Rock (weather 1 hr. 10 mins.

September 16
Little Rock to Dallas, 2 hrs. 25 mins.

September 17
Dallas to Hobbs to Dallas, 5 hrs.

September 23
Dallas to Hobbs to Dallas, 4 hrs. 30 mins.

September 25
Dallas to Hobbs, 2 hrs. 30 mins.

September 26
Hobbs to Dallas, 2 hrs. 15 mins.

September 28
Dallas to Coleman to Dallas, 2 hrs, 30 mins.

September 29
Dallas to Rondado to Austin to Dallas, 5 hrs. 55 mins.

September 30
Dallas to Coleman to Dallas, 2 hrs.

OCTOBER, 1950

B-35 Bonanza N5005C; Pilot, Bob Wemple
No. Trips, 20
Miles Flown, 9,804
Hours Flown, 62:35
Av. Trip Length, 490 miles; 3 hrs. 5 mins.
No. Nights Away From Home, 16

October 4
Dallas to Sweetwater to Snyder to Hobbs, 3 hrs. 10 mins.

October 5
Hobbs to Dallas, 2 hrs. 30 mins.

October 8
Dallas to Oklahoma City to Dallas, 3 hrs. 30 mins.

October 9
Dallas to Paducah to Evansville (stopped by weather), 5 hrs. 45 mins.

October 10
Evansville to Cincinnati (stopped by weather), 2 hrs. 5 mins.

October 11
Cincinnati to Reading (solo), 2 hrs. 40 mins.

October 12
Reading to Winston Salem to Birmingham to Shreveport to Dallas (around weather), 10 hrs. 35 mins.

October 13
Dallas to Oklahoma City to Dallas, 2 hrs. 40 mins.

October 13
Dallas to Abilene to Dallas, 2 hrs. 15 mins.

October 14
Dallas to Abilene to Dallas, 2 hrs. 15 mins.

October 14
Dallas to Oklahoma City to Dallas, 2 hrs. 45 mins.

October 16
Dallas to Duncan to Dallas, 2 hrs. 10 mins.

October 19
Dallas to Ada to Dallas, 1 hr. 45 mins.

October 20
Dallas to Houston, 2 hrs. 30 mins.

October 22
Houston to Dallas, 2 hrs.

October 23
Dallas to Shreveport, 1 hr. 15 mins.

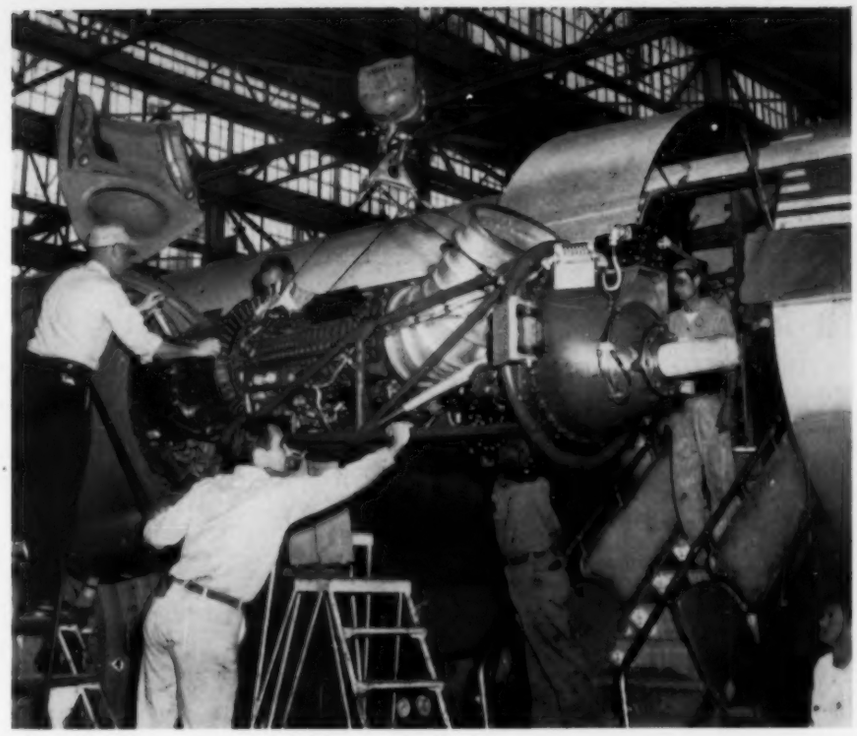
October 24
Shreveport to Dallas, 1 hr. 15 mins.

October 27
Dallas to Owensboro to Harrisburg to New York, 8 hrs. 5 mins.

October 30
New York to Pittsburgh, 2 hrs. 30 mins.

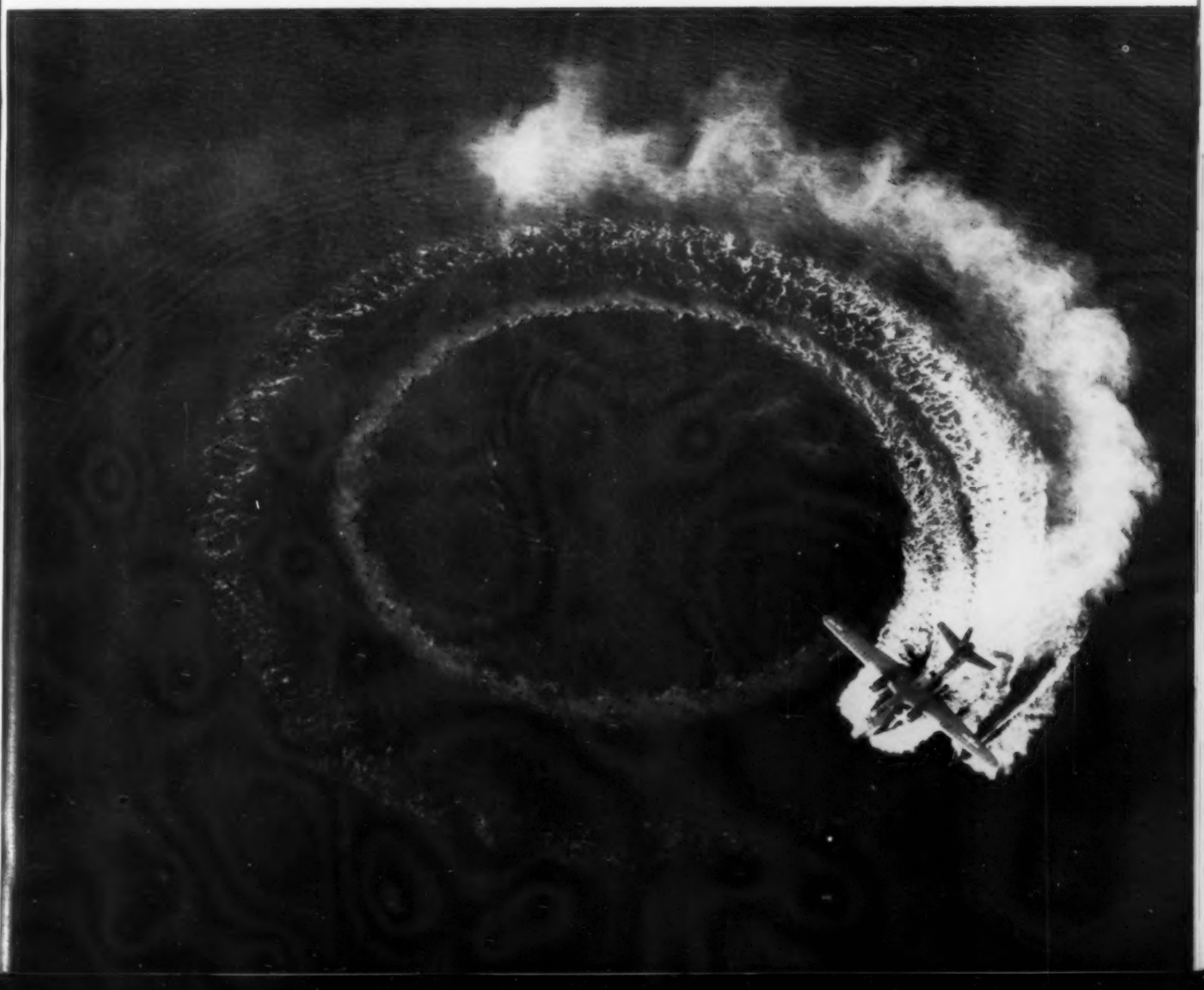
October 31
Pittsburgh to Washington, 55 mins.

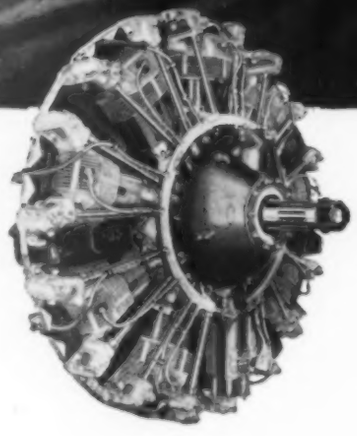
FIRST CONVAIR TURBOLINER has had 2,750-hp. Allison turbo-prop engines installed at San Diego, where first flight will be made this month. Nacelle has rail along which engine slides easily into place. Quick connections are provided by fuel and oil lines equipped with Aero-Coupling fittings. Turboliner is being built for General Motors' Allison division.
—(Convair Photo.)



flight pictorial

SHORTER TURNS FOR FLYING BOATS are possible with Glenn L. Martin's new hydroflaps — underwater rudders and brake located on each side of hull near stern and operated either separately or together from cockpit. Photo shows Martin XP5M-1 using 65-degree hydroflap setting to obtain one-third turning radius required when engines alone are used.
—(Glenn L. Martin Photo.)





POWER PLANT FOR THE FREIGHTER — *Two Wright Cyclone 9's . . . rated at 1475 hp. . . . provide the Chase Avitruc with high power for short take-offs . . . low weight for increased payload . . . durability for greater utilization.*

Freighter...

The versatile family of service-proved Wright Cyclone engines powers each of these widely different aircraft with an engine ideally suited to its needs.

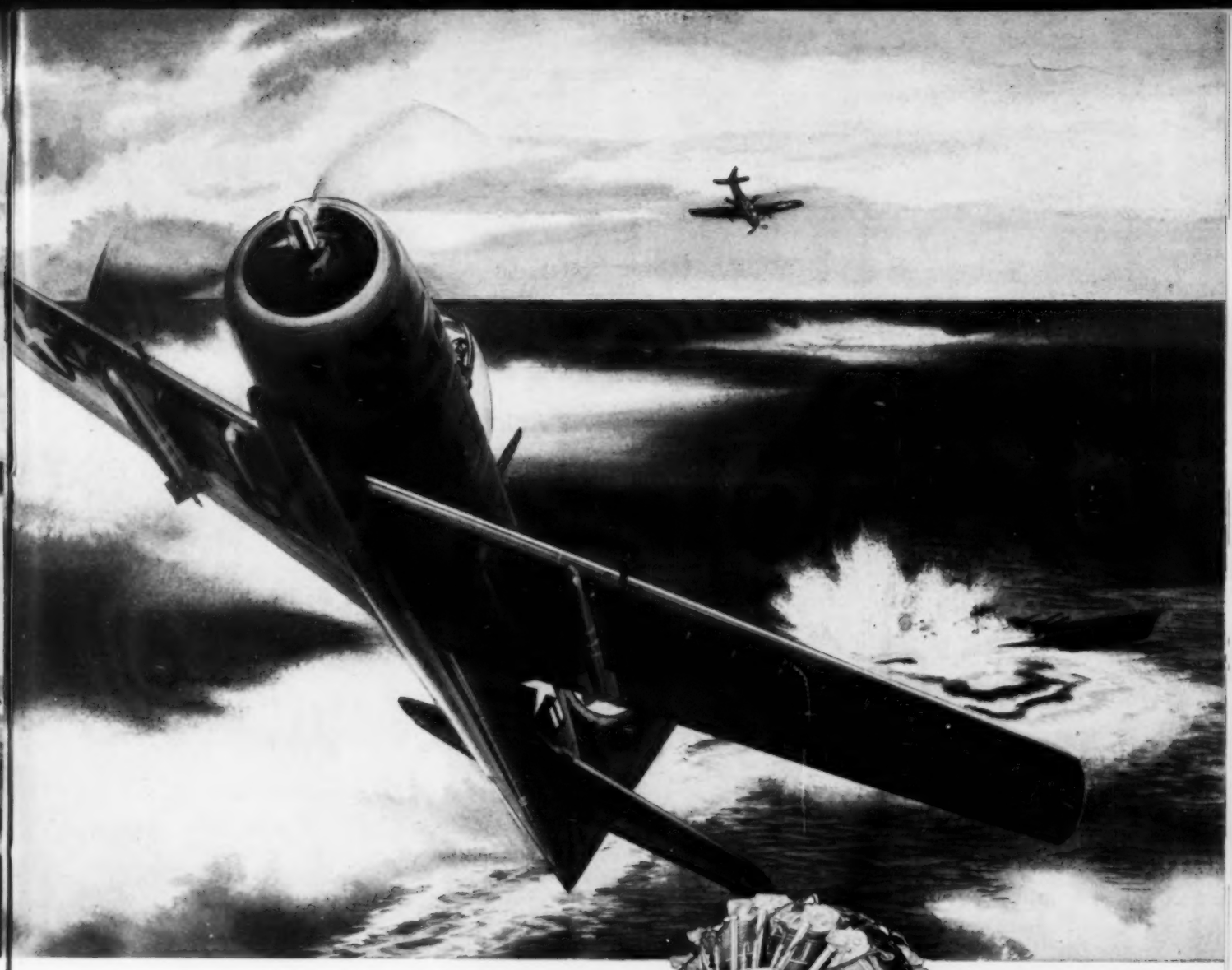
▶ **The Chase C-122 Avitruc**—Air Force assault transport—takes off from and lands on short unimproved fields, must load and unload fast, and deliver troops and equipment in effective numbers.

▶ **The Douglas AD Skyraider**—new Navy "Airborne Arsenal"—flies up to 10,000 lbs. of bombs and rockets at 500 miles an hour; is versatile, rugged, famous for long-range capabilities.

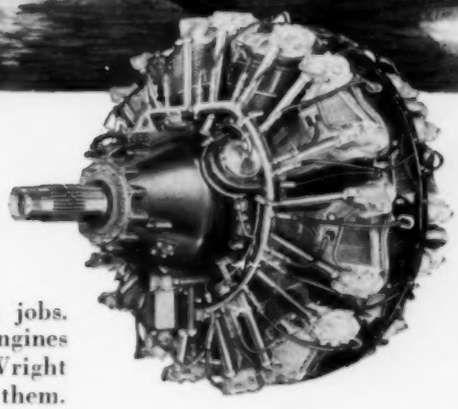
Lockheed P2V-4 Neptune

Piasecki H-21 Rescuer

Martin P5M Marlin



OR Fighter



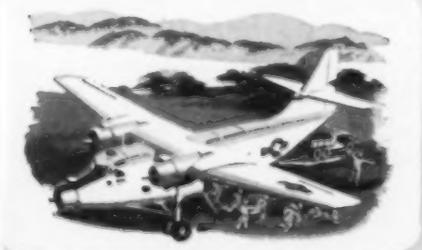
POWER PLANT FOR THE FIGHTER — *For the Douglas attack bomber, a single Wright Cyclone 18 delivers 2700 hp. for take-off . . . is designed and built to provide exceptional take-off, climb and range performance for carrier aircraft.*

▶ The six aircraft shown below do other important jobs. Each has its own special power needs—and Wright engines power them all. The future will bring new needs, and Wright engineering and production teams are ready to handle them.

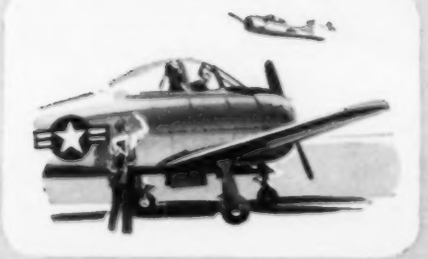
WRIGHT Aeronautical Corporation, Wood-Ridge, N. J.

A DIVISION OF CURTISS-WRIGHT CORPORATION

Northrop C125 Raider



North American T-28 Trainer



Lockheed Constellation

flight pictorial

FRONT-LINE LIFE SAVER is this Sikorsky helicopter, shown landing in combat area on Korean front while wounded soldier is brought out for air evacuation in the helicopter's litter (bulky object attached to 'copter). As of last month, Air Rescue Service Sikorsky H-5 'copters in Korea had saved the lives of more than 430 military personnel evacuated to rear areas. Six of these were picked up behind enemy lines. One helicopter was a victim of enemy action in a strange incident: A land-mine exploded beneath the helicopter while the pilot was cruising low and slow along a road behind the lines.
—(Sikorsky Photo.)

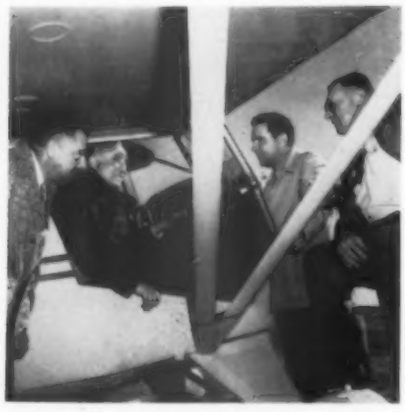
flight pictorial

CROP DUSTERS ORGANIZED last month at first convention of Agricultural Aircraft Association of California in Las Vegas, Nevada, elected as officers the business-like gents at right, shown at Hotel Last Frontier. I. B. (Skip) Seiden of Rio Vista, secretary, is doing the "flying" (center) while watched by Le Roy Lampson of Robbins, president (right) and Richard E. Hyde of Dos Palos, vice president.
—(Desert Sea News Bureau Photo.)

NEW SUPER TOWER at Tulsa Municipal Airport is only tower known boasting electric elevator, says Airport Manager Charlie Short. Used as model for others planned in many areas, 8-story tower cost $130,000 and is air-conditioned. Architect was Leon B. Senter and contractor was G. & W. Construction Co., both of Tulsa.
—(Tulsa Municipal Airport Photo.)

JET FIGHTER STAMINA proved high in first accelerated service test just completed at Muroc's Edwards Air Force Base, with three Lockheed F-94's being flown around the clock for 30 days straight under gruelling conditions. Not a single Allison jet engine had to be changed throughout the test, conducted by maintenance crews and pilots working continuous shifts to keep the jets aloft. Some pilots flew 15 hrs. a day; all jet pilots at the base took turns, including the commanding general, Albert Boyd. Afterburners were tested strenuously as well as engines, which were shut off and restarted many times in flight.
—(Lockheed Photo.)

FIRST OF HUNDREDS OF NEW CESSNA L-19 LIAISON PLANES being produced in Wichita, Kansas, is shown following acceptance by the military. Continental's new 213-hp. engine powers the craft, which cruises at only 29 per cent of rated power. Photo at right shows commercial Cessna production, now at 5 planes per day.
—(Cessna Photos.)

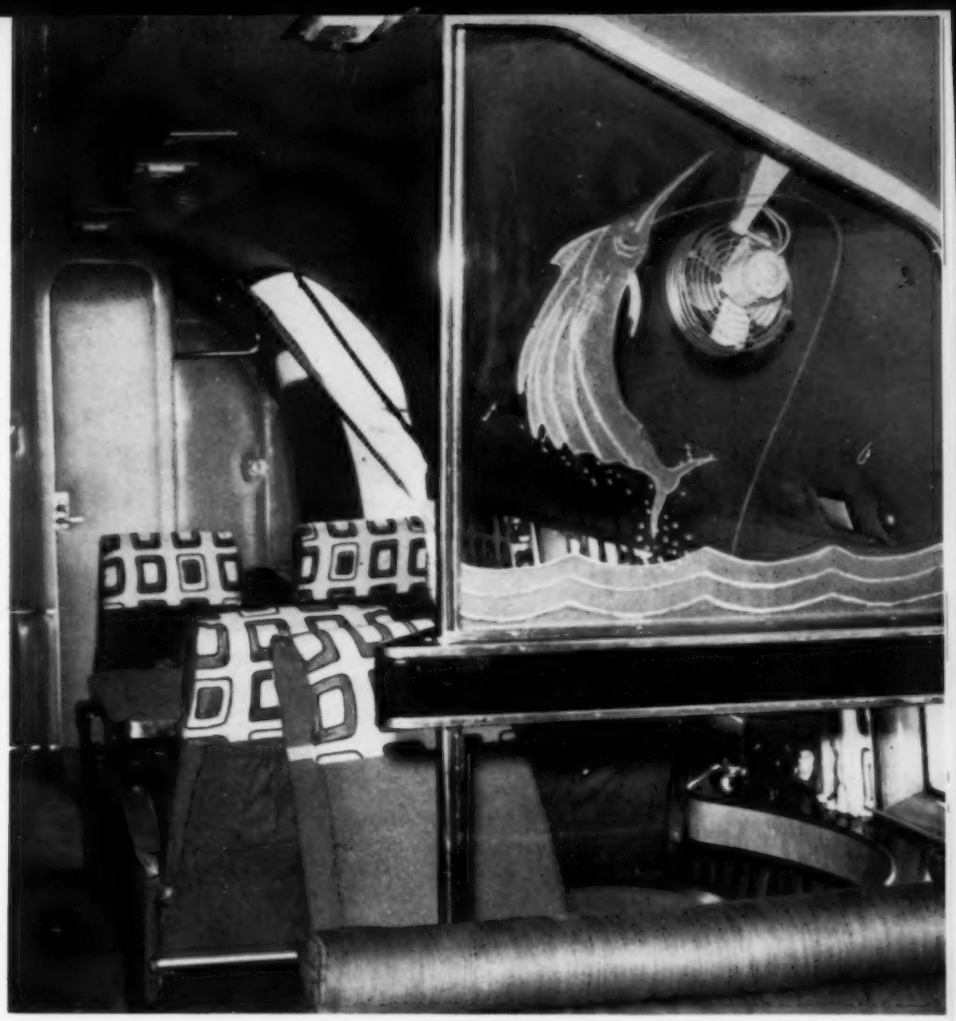


flight pictorial

FLYING'EST AIRCRAFT EXEC is W. T. Piper, who often delivers Cubs his factory produces. Greeting him here are Texas Cub distributor-dealers Jack Robinson, John Huett and E. H. Parker.
—(SOUTHERN FLIGHT Photo.)

ADMA AIRCRAFT SALES MANUAL was unveiled at recent NATA convention in St. Louis. G. B. Van Dusen (right), ADMA president, shows manual to NATA officers (left to right) Charles A. Parker, executive director; Art Curry, president, and John Clinch, Region 5 vice president.
—(ADMA Photo.)

NEW OFFICERS OF NATIONAL ASSOCIATION OF STATE AVIATION OFFICIALS are shown above. Left to right are Bud Moore of Mississippi, third vice president; Joe McLaughlin of Illinois, first vice president; Crocker Snow of Massachusetts, president; Warren Carey of Calif., second vice president, and Claude Friday of New York, treasurer.
—(Minnesota Aeronautics Department Photo.)



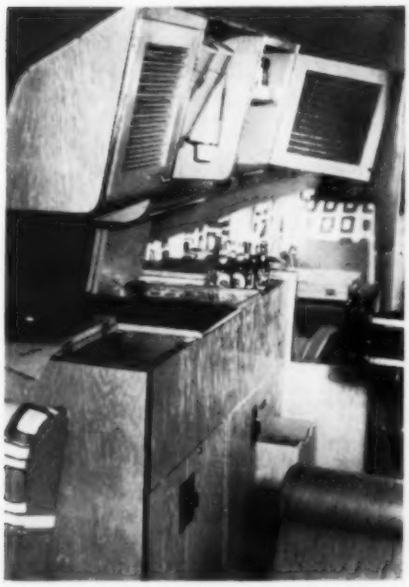
Plexiglass bulkhead divides cabin of Financier Clint Murchison's DC-3, "Flying Ginny." Behind it are upholstered swivel chair and writing desk with intercom telephone. Interior doors in rear lead to washroom (left) and main cargo compartment. Cabin seats 15 persons, five on huge sofa and rest at tables.
—(SOUTHERN FLIGHT Photo.)

Cabin Mastery

By TOM ASHLEY

CABIN conversions in executive transports are reflecting more and more skill and craftsmanship as the result of experience acquired since war surplus Douglases, Lodestars and other types became available to business men for corporate use. With the larger aircraft came greater cabin roominess and payloads and most of them have made the most of opportunities thus offered for custom interiors. The mastery of cabin interiors is becoming a fine art.

Instead of the old standby aircraft fabrics, fittings and chairs which emphasized lightness in weight and midget dimensions at the expense of comfort and aircraft utility, aircraft conversion centers now use decorators' fabrics in a wide range of weights and colors, plastics and chrome, hardwoods and foam rubber. Chairs big enough for comfort are overstuffed when desired and even mounted on swivels. Writing tables are large and convenient instead of being fragile and knockabout. Sofas are king size and many make into over-size beds. There's hot-



Large galley in "Flying Ginny" has several refrigerated and storage compartments, with large work area on top. Above are cabinets for utensils and supplies, with thermos storage.

Airstair door and large outside baggage door of "Flying Ginney." Inside large cargo compartment can be seen door leading into cabin for access to rear compartment during flight.
—(SOUTHERN FLIGHT Photos.)

ALWEATHER FLITEGAGE is being demonstrated around the country by Colonel Carl J. Crane (left), recently retired from USAF and pioneer in instrument flying from its original conception by the late Col. W. C. Ocker, with whom Crane worked for years. Shown with Col. Jack Lapham (right), Flying L Ranch owner, who has experimental unit in his Beech D-18S for the demonstrations, Crane's device presents in one instrument of 4-in. diameter information registered by all flight instruments, such as horizon, ILS cross-pointers, ADF, directional gyro, air speed, sensitive altimeter, etc.
—(SOUTHERN FLIGHT Photo.)

and-cold running water in the wash room, which also features roominess and mirrors and electric razor outlets.

Better Transportation

Instead of the unwieldy thermos rack attached to a door or a bulkhead, there's a big, useful galley with plenty of hot and cold beverages and food, ice, supplies and facilities to prepare and serve them. Extra-thick soundproofing makes the cabin as noiseless as a yacht's stateroom and improved ventilation and heating make it even more comfortable. More horsepower and speed, more cargo and baggage space and improved radio communications and navigation facilities complete the conversion to offer executive air transport standards never before possible at any price.

An example of such progress is the newly-improved "Flying Ginny," a DC-3 owned by Clint Murchison, Texas financier and user of executive airplanes for two decades. We've noticed his Douglas on many airports here and in Mexico and recently were shown inside by Pilot Don Beeler and Co-Pilot John Bowling.

In addition to the compact Airstair cabin ramp which many executive transports are installing, "Ginny" has a very large rear cargo door. This rear compartment is extra-large and also has a large door leading inside the cabin. Very large cargo capacity is also up forward.

In the cabin, there are seat belts for 15 passengers, including a big sofa for five. This is up forward, with a novel plexiglass bulkhead separating it from the rest of the cabin. In the bottom of this bulkhead is a light which illuminates a curved writing desk. The same light also imparts a glow to a large sailfish design tooled into the plexiglass (the DC-3 is used frequently on international fishing trips). A

25 ACRES OF TRANSIENT EXECUTIVE AIRPLANES will look like this on January 1 when the Universities of Texas and Tennessee meet in the Cotton Bowl. The picture shows some of the 206 executive planes which brought fans to the Cotton Bowl's recent Texas-Oklahoma game. They were parked and serviced by Southwest Airmotive's 11-man line crew using five fuel trucks and six girls handling paper work. Southwest Airmotive called in a 50-passenger special bus, 156 taxicabs and a fleet of rental autos to move the passengers from Love Field to hotels and the Cotton Bowl. SAC has enlarged its facilities with the recent acquisition of another large hangar, taking over the one formerly used by Braniff Airways adjoining the concrete ramp above on the extreme left.
—(Southwest Airmotive Photo.)

NEW 2-WAY VHF UNICOM PORTABLE developed by Lear, Inc., is 24-lb. VHF transmitter and receiver for operators on airports without control towers and is used to converse with private planes on the new 122.8-mc universal communications frequency. Installation involves only assembling a simple 60-ft. antenna cable and plugging the unit into a 110-volt, 60-cycle power source. Anyone licensed for aircraft radio operations is qualified to operate a Unicom on the ground.

single swivel chair at the desk is within reach of a tuning head for the cabin radio and an intercom telephone. Opposite it is a very large galley with several refrigerated compartments — one for dry cold, another for cold storage in trays, another for ice and the like. Ample work space is provided atop the refrigerated compartments, and above it are cabinets for utensils, supplies and thermos storage.

Chairs in the cabin are grouped about three fabric-covered tables, one of which accommodates four chairs. The others have two chairs each.

More Power, Speed

Forward of the cabin in the cockpit, the conventional bulkhead immediately behind the pilot has been removed and as a result spaciousness is emphasized. Custom instrument and radio panels had not been completed when we visited the ship, the 81st executive transport conversion to be completed on a custom basis by Dallas Aero Service.

Pilot Beeler had Model 1830-75 Pratt & Whitney engines, rated at 1,350 hp. each, installed. Empty weight is 17,360 lbs., and allowable gross weight is 25,200 lbs., which is seldom reached. He had not yet checked his performance but another custom DC-3 with similar equipment has been indicating 180 mph. for cruising. That makes the Douglas quite an airplane in performance, as well as in cabin refinements, and the combination will result in more utilization than ever for Owner Murchison and his business associates, who include some of North America's most prominent industrial figures. ★ ★ ★

This Beech panel is interesting because practically everything that counts is dual. One final modification remains to be done—the lower left turn and bank will be moved up, swapping position with the fuel gauge.
—(SOUTHERN FLIGHT Photo by Tom W. Collins.)

Check and Double Check

Two of everything makes this executive Beechcraft more dependable

OF unusual interest to executive pilots and others concerned with going completely "dual" for safety's sake in their Twin Beechcrafts or larger multi-engine transports, Beech D-18S N7388 features a panel arrangement reflecting years of experience, thoughtful planning and attention to detail. All of this went into the numerous items installed over a period of time by Fred K. Dick of Southwestern Public Service Company, which averages about 50 hrs. monthly executive utilization year in and year out in N7388. It is as near to being an "all-weather Twin" as one can be.

A close study of the panel reveals that just about everything that is important is dual in this installation. Some of it worthy of special attention includes the following:

Note the two cross-pointer indicators, placed side by side. Some airplanes have dual ILS indicators, but not many have them hooked up to four separate receivers as these two are, there being two localizer receivers, one for each of the runway localizer needles, and two glide path receivers, one for each glide path needle. Note also the dual ADF pointers combined in one instrument. They can be used to double-check the ILS localizer indicators, one ADF pointer being turned to the outer marker and the other to the middle marker—if the ILS transmitter's signals are bouncing around off of taxying airplanes or trucks or some other moving object, the dual ADF pointers will not be lined up and this will reveal the flight path as being erratic and you'll know the ILS indicators are giving you a bum steer.

You've seen dual altimeters, but these are mounted next to each other and adjacent to the ILS indicators for a reason: They provide not only a check against each other but against the glide path needles, and without roaming the panel your glance tells you the correct altitude over outer and middle markers.

There's another ILS trick involved in N7388's panel, too. Just below the directional gyro on the left (there is another directional gyro on the right to complete the dual installation of these), you'll note a small, two-position switch. This is hooked up with the localizer indicators. Throw this switch and you get reverse indications, and along with them as a reminder you also get a glowing red light just above and between the two ILS indicators. This reversing is used when flying the back courses outbound on the localizer—without the switch arrangement you would have to remember that your indications were backwards but with the switch you see what you're doing without having to remember.

Marker beacon lights are not only dual but are wired to dual receivers. Communications are also on a dual basis with separate transmitters and receivers. There are also dual warning lights for oil, fuel and vacuum pressures.

There is a reason why the dual air speed indicators are wide apart, and this brings us to a novel "horizon line" arrangement of flight instruments. The air speed indicator to the left of the ILS indicators has a rotatable face. This is chiefly to serve as an aide in maintaining selected air speeds—it is rotated for approach so that 115 mph., for example, shows the air speed needle on a horizontal line. On this same line across the adjacent instruments are the dual ILS glide path needles, and just to the right of them is the indicator for rate of climb or descent. All grouped together, these form a handy unit easy to read in a straight line and at a glance without effort.

The air speed indicator on top at the right of the magnetic compass is installed so that when the needle is horizontal it indicates 150 mph., which is the D-18's ideal rough-air speed. Instead of staring at the figures on the dial while jouncing around in turbulence, you just hold the needle on the horizontal. The rotatable air speed indicator is useful also in cruising. If you want a double-check on the rate-of-climb indicator, sensitive altimeter and No. 1 air speed indicator, just rotate the instrument until your cruising speed reading brings the needle to the horizontal. If speed builds up and the needle dips below the horizontal, you're losing altitude and apply back pressure to "center" it. If the needle rises from the horizontal, you're climbing at reduced speed; so you apply forward pressure to center the air speed needle.

Fred Dick has improved the panel still further by having screw-in bulbs installed to rim-light all important instruments. These are rheostat-controlled for most effective brilliance when needed. When he was all through with his last modification to the panel, he came up with a blank space to the right of the fuel-air ratio gauge. He filled it with a timer, which can be dialed to sound its bell at any interval up to 30 minutes as a reminder to tune in a weather sequence, valve in a fuel tank or maybe pour more coffee. ★ ★ ★

Veteran Air Pilots Association

If you have a minimum of 1,500 certified solo hours and have been flying for at least ten years you can qualify for membership in the Veteran Air Pilots Association. Applications should be sent to Leslie P. Huey, Louderman Building, St. Louis.

By JIM WHEELER

ONE of the many distinguished airmen in VAP's membership is Robert L. Copsey, director of aeronautics for the state of New Jersey. Now a brigadier general in the U. S. Air Force Reserve, Copsey has been an active pilot since 1917, holding CAA Pilot Certificate No. 29. He has been an active air reserve and National Guard officer since 1919, being a command pilot with a green card.

Robert L. Copsey

During 1927-29, he was American Legion department commander for Wyoming. Copsey was co-author of the Federal Civil Air School Regulations. During 1929-33, he was president of Newark Air Service, Newark Airport, N. J. He commanded the New Jersey Air National Guard during 1931-39, during which he also served as a member of President Roosevelt's committee on air safety. His World War II service from September, 1940, to 1946, tours as commanding officer of the 59th Reconnaissance Group of the 1st Army; commanding officer of the Springfield (Ill.) Air Depot; commanding officer of Baer Field Air Base, Ft. Wayne, Ind., and commanding general of the I Troop Carrier Command, Indianapolis.

General Copsey's current activities: Commanding general, 63rd Troop Carrier Wing, N.A.S., Floyd Bennett, New York; New Jersey commissioner of aviation since 1931 and director of aeronautics; member of the department of the Air Force Ad Hoc Committee for Civilian Components; and board chairman of the New Jersey Wing, Air Force Association.

Ralph E. Piper

CHIEF pilot for Monsanto Chemical's fleet of executive airplanes is VAP'er Ralph E. Piper of St. Louis. He learned to fly in 1937 at Waterloo, Iowa, getting commercial and instructor ratings in 1940 and instructing in CPT. Moving to Cuero, Texas, with the Brayton Flying Service, he was chief pilot of that Army primary contract school until he was commissioned a first lieutenant in the 3rd Ferrying Group in 1943. Overseas, he flew the Hump, earning Air Medal, DFC and a promotion to captain with a presidential citation. In 1945 he became a pilot with Remmert Werner Flying Service, being hired by Monsanto in 1946 when it purchased a Beech Twin. The picture shows him in "Prairie Wings," a DC-3, which he flew over 1,000 hrs. touring 23 countries in South and Central America.

M. L. L. Short

ALL of M. L. L. Short's flying in recent years has been personal and in the Massachusetts Air National Guard. He lives at Swampscott, Mass. VAP'er Short began flying in 1929 with Curtiss Wright Flying Service, East Boston. During 1934-36 he was a pilot and sales engineer for Standard Oil of New Jersey. He received an Air Corps Reserve commission and pilot rating in 1938, and in 1939-40 he demonstrated and sold airplanes for Inter City Aviation Co. in East Boston, joining American Airlines in 1941 and receiving his AA captaincy in 1943. After ten months of AA flying over the North Atlantic, he was called to active duty and assigned to ATC in Europe, being base chief pilot and director of operations until released from the Air Corps in 1945 when he returned to AA. In 1947 he left the airline to go into manufacturing.

William A. Ong

BILL Ong has been flying since 1926, learning the game in Kansas City where he still resides. His first commercial venture was Beacon Airways of America, which folded in the 1929 crash after a short life, with Bill becoming sales manager for Rearwin Airplane Company. In what he calls an "ill-advised" moment, Ong and that company parted eight months later, Bill moving over to Inland Aviation, an Insul enterprise, as sales manager. This folded in 1931 and Ong went on the air via promoting a radio show, "The Air Adventures of Jimmie Allen," placed by Skelly Oil and later sold all over. His debts paid, he moved to Waco Aircraft in 1934 as sales manager for the central states, joining Beech in 1935 as general sales manager.

He started Ong Aircraft Corporation in 1937. During the war, his firm trained 7,300 pilots at nine flying fields without a fatality or injury. Today, Ong is president of Ong Aircraft Corp., Aero Chemical Industries, Inc., and Aviation Acceptance Corp., all headquartered in Kansas City. He's also president of Aircraft Sales Co., Fort Worth. Honors coming his way in a busy career have included presidency of the Air Reserve Officers Association in Kansas City, charter membership in Professional Racing Pilots Association, and twice president of National Aviation Trades Association.

E. O. CARMODY of Link Aviation, Inc., organized and headed the Navy's first synthetic flight training research project (pre-flight) in 1942, six years after graduating from Pensacola. In the interim he had served with Fighting Squadrons Three and Five aboard the Ranger and Yorktown, had flown in the National Air Races as a member of the Navy stunt team, and

(*Continued on page* 33)

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Service for your Beechcraft at Certified Beechcraft Service Stations consists of many things, all aimed at providing complete satisfaction in your flying.

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It means limousine or courtesy car transportation, attention to such details as windshield cleaning and many other extra services which Certified Beechcraft Service Stations take special pride in providing.

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Our skilled and efficient Beechcraft factory trained staff, adequate equipment, stock of factory authorized parts and accessories plus economical prices assure the Beechcraft owner of *packaged service* at any of the Certified Beechcraft Service Stations listed.

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General Mitchell Field
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Truax Field
Madison, Wisc.

Atlantic Aviation Service
New Castle County Airport
Wilmington, Delaware

Atlantic Aviation Corp.
Teterboro Airport
(25 minutes from Times Square)
Teterboro, New Jersey

Butler Co., Aviation Division
Municipal Airport
Chicago, Ill.

Francis Aviation
Capitol City Airport
Lansing, Michigan

Gray Aircraft Svc. Co., Inc.
D. A. Cody, Service Mgr.
Love Field, Dallas, Texas

Harte Flying Service
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Wichita, Kansas

Ohio Aviation Company
Dayton Municipal Airport
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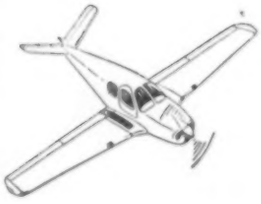

A STATEMENT OF POLICY BY THE J. D. REED COMPANY

International developments of the past several weeks have brought up the subject of material and parts availability, which will affect every industry.

The J. D. REED COMPANY wishes to advise its customers that it will be able to take care of their needs as our inventory levels and firm commitments indicate we will be able to supply the normal demand for supplies, accessories and parts.

We wish to assure you that we very much appreciate the business given us during 1950 and that, barring government intervention, in 1951 as in previous crisis periods, WE WILL TAKE CARE OF OUR CUSTOMERS.

Sincerely yours,
J. D. REED COMPANY.

E. O. Carmody

M. V. Smith

Frank Steinman

C. E. Shockley

VETERAN AIR PILOTS

(*Continued from page* 30)

had been a Navy flight instructor. As training and special devices officer on the staff of the Naval Air Primary Training Command, he introduced and integrated training devices into primary training beginning in 1943. In 1945 he was air officer aboard a combat carrier, and was returned to inactive duty the same year with rank of commander. In 1948, he completed the Quonset Point Jet Transition School as a pilot temporarily attached to Fighting Squadron 171.

MILTON V. SMITH of Portland, Maine, learned to fly in 1929 at Curtiss Wright Flying Service and since 1934 has operated Northeast Aviation Co., at Portland.

FRANK STEINMAN owns and operates an air ambulance service at Roosevelt Field, Long Island, N. Y. He began flying in 1929, has well over 8,000 hrs. as pilot and is also an A. & E. mechanic. He began operations of a flight school and charter service at Roosevelt Field in 1930 and his instrument flying school was one of the first in the East. In 1938 he flew extensively in Europe.

CLYDE E. SHOCKLEY, who operates Muncie Aviation Corp., at Muncie, Ind., which he founded in 1932, has been flying continuously since 1920. He learned to fly that year at the Curtiss Indiana Company at Kokomo, later opening his own airport there in 1926 before moving to Muncie. ★ ★ ★

CALIFORNIA PLAN

(*Continued from page* 17)

including the functioning of the communications network and the responsibilities of the Airport Manager regarding the procurement of aircraft and pilots for special missions.

CONDITION THREE

A. Assumption.

Active war as a result of declaration or enemy attack. 1. A military situation which may permit a continuation of the controls established under Condition Two. 2. A military situation which will require controls in addition to those established under Condition Two. 3. A situation which, because of the existence of disaster conditions, will require controls of such a nature as to assure a maximum amount of assistance to the civil defense authorities and the armed forces in the matter of disaster relief.

B. Objective.

Maximum use of civil aircraft and aviation facilities in co-operation with military and civil authorities in the successful waging of an all-out war effort including disaster relief.

C. Planning Action.

(For general, airmen, aircraft and airports this will be to review and emphasize both the Planning Action and the Action Required, Condition Two.)

D. Action Required.

1. GENERAL. a. Under certain military situations, controls other than those established under Condition Two will not normally be required. Temporary controls may be imposed by competent authority for drill or other purposes. b. Upon receipt of an appropriate directive from the armed forces based upon a change in the military situation, the CAA shall publish and expedite the dissemination of such directive throughout the CAA communications system. Upon receipt of such directive, the Managers of Master Control Airports and Control Airports shall expedite by all means available the further dissemination of this information in accordance with the provisions of this plan. Such directive may be general in scope or may be limited to specific geographical areas or operational requirements. c. In event of existence of disaster conditions, and upon receipt of a request from appropriate military or civil authority for the assistance of civil aircraft owners, pilots and other aviation personnel, for disaster relief, the CAA communication system and all other means of communications shall be utilized to the fullest extent by competent authority in the widespread dissemination of such request.

2. AIRMEN. The California Aeronautics Commission shall, through appropriate press releases and all other means at its disposal, impress upon all pilots and aviation personnel, the necessity of strict compliance with all rules and regulations effected under Condition Three, and the results of non-compliance therewith, including the possibility of interception and attack by the U. S. armed forces.

3. AIRCRAFT. No action required other than that provided under Conditions One and Two.

4. AIRPORTS. a. All local airport authorities shall review and enforce the security provisions for airport property and aircraft based thereon. b. The Airport Manager shall report to the California Aeronautics Commission, through the established communication network if possible, any damage which has occurred at his airport or to the aircraft based thereon, which damage has resulted in the unavailability of the landing area, servicing facilities or aircraft. ★ ★ ★

The Man with a Mooney Is a Flying Business Man

GRANT ZICKGRAF

The Mooney M-18C cruises 130 mph. at less than 1c per mile for fuel and oil

MOONEY AIRCRAFT, Inc. Airport P. O. Box 3012, Wichita, Kansas.

"MOONEY'S THE BEST FOR MY BUSINESS USE," says Grant L. Zickgraf, Vice President, Zickgraf Hardwood Co., Inc., Franklin, N. C. "I have owned many airplanes but selected the DeLuxe MOONEY not because of its amazing economy or its modest price . . . but simply because it's the best airplane available for business trips in and out of the Great Smoky Mountain region where my firm operates."

AIR REPORT

(Continued from page 7)

into this. With less and less to sell, operators must now concentrate on servicing existing aircraft and accessories. More charter operations will also result.

SUDDEN DEATH OF WALTER H. BEECH from a heart attack on Nov. 28 in Wichita, Kansas, was reported as we went to press. The former Tennessee farm boy, who became one of the world's most successful aircraft manufacturers, was 59 years old. During World War II, 7,402 Beech airplanes were built in the Wichita factory he established in 1932 during the depths of the depression. Now at the peak of success, his firm was expanding again under pressure of another war's approach when its founder was stricken. Planes he designed and built had won top performance honors for 25 years, starting with three Travel Airs which finished the 1925 Ford Reliability Tour with perfect scores and including racers which sometimes he personally flew to victory. A genius for flight efficiency, Walter H. Beech was a symbol of American air progress—a true pioneer aircraftsman and a 10,000-hour pilot.

LATEST LIAISON AIRCRAFT COMPETITION at Wright-Patterson Air Force Base for order of "more than 40 planes" began early in December with just about 24 different makes of planes entered. . . . **TWIN-ENGINE AERO COMMANDER** production is ready to start at new plant in Oklahoma City. Lycoming 260's have been installed in prototype, now being demonstrated to military. . . . **FLIGHT SCHOOL OPERATORS** are swamping Greenville, Mississippi, by hundreds to enter bids for USAF's first civilian contract school which will be operated there with about 450 cadets. At least two more such schools are believed to be planned.

PLANE-AUTO TURNABOUT took place when Marshall's Field, Texas' erstwhile "department store of the air," closed its runways to open a housing project and established a Kaiser-Frazier auto sales and service center in its hangar. Last plane in was flown by Aircraft Designer-Executive Al Mooney, who bought new Kaiser from J. W. Marshall and drove home. Marshall said Al's purchase helped launch him in auto business, and Mooney replied that Marshall's plane sales had once kept him in flying machine business. Now both are happy. Bill Taylor, Mooney's test pilot, is Marshall's auto sales manager.
—(SOUTHERN FLIGHT Photo.)

WINSOME TWIN BEECH PILOT is Delphine Bohn, who not only flies 'em but sells Beechcrafts for J. R. Gray, Inc., Beech distributor at Love Field, Dallas. Former commander of largest WASP squadron until it was deactivated in 1944, she's been selling Beechcrafts ever since, coming to Dallas from Pacific Aircraft Sales of Los Angeles. Miss Bohn is an active reserve in the U. S. Air Force, has some 3,500 hrs. and an impressive executive aircraft sales record.
—(Photo by Tom W. Collins.)

CHASE AIRCRAFT PRODUCTION IN ALABAMA is being readied, the firm having leased the Bechtel-McCone plant in Birmingham for production of USAF assault transports.

MIAMI AIR SHOW promises full schedule of aerobatic competition for national honors, stock plane races and other events Jan. 6-7, according to Jess Bristow, president of Florida Air Pilots Association, which will sponsor it. It will be followed by 8th annual Miami-Havana lightplane cruise Jan. 8-10 with over 176 airplanes expected to make the over-water hop. . . . **FIRST FLIGHTS OF RESEARCH CROP PLANE** were successful at Texas A. & M. College Airport in late November. It features low wing of 20-in. thickness in which spray dispensing apparatus is submerged and can also be equipped for dusting, seeding and fertilizing.

Feeder Facts and Figures

CAB CHAIRMAN DEL RENTZEL has told feeder airline executives that he believes local air service is "here to stay" and that he believes certificates for feeders should be more permanent than at present. As a result, operators are more confident than ever. . . . **"LOCAL SERVICE AIRLINES"** is being referred to in some air transport quarters as "new" term but was first used in this magazine months ago in numerous editorials calling for extension of air service to smaller communities. "Feeder" is still a good, literal term. We'll use both.

WIGGINS AIRWAYS may be first scheduled airline to use DeHavilland Doves. . . . **5-YR. EXTENSION OF PIEDMONT'S CERTIFICATE** has been proposed by CAB from date of current certificate's expiration on Dec. 12, 1950. Certain route adjustments are also proposed, including extension of service from Beckley, W. Va., to Lexington Ky., and addition of Hickory, N. C., for service.

OCTOBER WAS PIONEER AIR LINES' BEST MONTH since it began operations as the nation's first feeder. Revenue passengers totalled 12,669 and revenue passenger miles were 3,402,727. Air freight, which is running 98 per cent ahead of last year's, totalled 12,895 ton miles for the month, with 8,802 ton miles of air mail and 4,186 ton miles of air express. Breakeven mail pay need for October was slightly over 15 cents per mile.

FRONTIER AIRLINES has launched an intensive sales campaign, concentrating on Arizona and New Mexico in December and moving from there into Colorado, Utah, Wyoming and Montana. Don Duff, vice president, is sending two new assistants into the field with teams of salesmen to conduct the drive. They are Brooke B. Burnham, former CAL sales manager in Denver, and Robert M. Evans, former Braniff sales manager in Denver.

LOS ANGELES AIRWAYS has been awarded a contract for training Air Force pilots in advanced helicopter instrument flying technique. ★ ★ ★

Change

North, East, South, West—the industry agrees on our change in name. Here are some typical reactions:

"Should have made the change years ago."
—Tom Braniff, Pres., Braniff Airways

"Dropping 'Southern' is something I've long hoped you could do. It should give you the national scope your activities and interests deserve."
—Bill Strohmeier, Vice Pres., Davis-Parsons, Inc.

"Congratulations on the new scope of your magazine implied in the change of title to FLIGHT Magazine."
—Harold Mansfield, Boeing Airplane Company

"FLIGHT Magazine!—That sounds good to me!"
—Phil McKnight, Beech Aircraft Corp.

"Changing the name of your magazine to 'FLIGHT Magazine' will be much more descriptive as I am sure your coverage today is nation-wide if not world-wide."
—Jim Wheeler, Shell Oil Company

"That's really good news about the change in your name from Southern Flight to FLIGHT Magazine."
—Bill Wagner, Ryan Aeronautical Company

"I am pleased to hear of the expansion plans for your magazine."
—J. H. Carmichael, Pres., Capital Airlines

"I think you are making this change at a very opportune time and I'm sure the change will enable you to obtain the national coverage you desire."
—Jake Miller, Piper Aircraft Corporation

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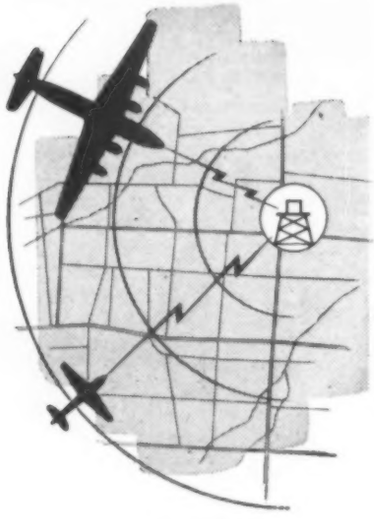

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Questions and Answers For Airport Operators

Going Out After Business

QUESTION: My wife and I have been reading your "Question and Answer" column for a long time and we think it's our turn now to ask a question. Out where we live there aren't any big towns and there aren't very many people. Mostly it's ranches and some oil wells and small towns like the one where we have our airport. There aren't very many of the small towns but money isn't too tight, it's just hard to find. The first two years or so after the war we did all right training veterans and doing some charter trips, a few airplane sales and a little transient business. We like it out here but aside from the transient business, which is picking up, we don't have a lot of income. What can we do to build up? I'm a good A and E but my tools are lying idle most of the time and so are my airplanes.

ANSWER: As we remember your part of the country it's sparsely settled and complete with long distances. Likewise there aren't too many operators, either. But there are a lot of airports in your county and the ones around you. Mostly they are ranch strips and airports of that sort, but they certainly signify that aviation isn't dead out there.

Perhaps you have been confining your selling efforts to your own town and your own county. Have you ever considered packing up a set of tools and some plugs, rolling out an aircraft and setting out on an exploring trip through your county and those surrounding it? You probably know where every ranch strip is in those counties. On the other hand do you know where the ranch owners go for maintenance? Would they appreciate your dropping in to do any work they might need or might have neglected to have done?

Sit down and chin with them awhile, let them know that you can bring service to their doors and acquaint them with your shop and what you have to offer there. Perhaps there is a youngster on a ranch who may be a flight instruction prospect. Maybe there is some specialized work to be done that the rancher can't do with his own airplane. If you aren't equipped to do it you certainly can find someone who is. While you're talking find out if any of the neighboring ranches look like good prospects. Find out how much the rancher uses his airplane to check his fences, and, if it's rough country, to locate cattle not brought in at round-up. If he actually uses his aircraft for such purposes, see what you can do along the same lines with any of his neighbors who don't own aircraft.

If he isn't satisfied with his aircraft, you'll find that out in a hurry. Help him correct that or sell him another if that is the answer to his dissatisfaction. Sell him your town as a place to shop and kill two birds with one stone by suggesting that, while he is doing that, you can do any repair and maintenance work necessary on his aircraft. If he has an aircraft he certainly uses it occasionally to go to town and try to get him to make it your town and your airport.

You might carry the whole idea a little further by offering to tune up his tractor while you're there, if you think you can do a good job on it. Don't depend on the people who come to you for service, but take service to them. This is mighty important in sparsely settled areas. Be sure to leave your telephone number with him and if he does get into trouble be sure to answer him when he calls you. Instead of serving a limited area with limited customer possibilities you may be able to spread your trade territory over a wider area.

Now you're going to ask what is going to happen on your airport while you're gone. It will be just the same as when you're away on a charter trip, but you can plan your selling trip pretty well so that if you're needed your wife can call you on the telephone. An airport of the kind you run has to have some one to go out and generate some business. It won't just come to you, not in any great volume anyway. As we remember your field, you and your wife live in a house right near the hangar and your wife is fully capable of looking after incidental local and transient business while you're gone.

Let's Save Our Hangars

QUESTION: About two years ago our city gave a lease to a local aircraft owner which allowed him to put up his own individual hangar on Municipal Airport. He erected a good, sound building and has maintained it. Under the terms of his lease for five years, the hangar remained his property and at the end of the term he was required to remove it unless he could negotiate a new lease with the city. Now he is moving to another city and, of course, will take his aircraft with him. He wants to leave his hangar standing until he can sell it but objects to paying lease rental because

LONG-RANGE RECONNAISSANCE FOR STRATEGIC AIR POWER is provided by latest model Convair RB-36's for the U. S. Air Force. Like B-36D bombers in every way except that cameras and other special devices are carried instead of bombs, it is powered by 4 General Electric J-47 jet engines and six 3,500-hp. Pratt & Whitney piston engines. Ceiling is over 45,000 ft., maximum speed more than 435 mph. Forward bomb bay is equipped with 14 different cameras, including one with a 42-in. focal length lens—largest photographic installation ever made in an airplane. Defensive armament includes eight remotely-controlled automatic turrets firing 16 20-mm cannon. RB-36's are in quantity production at Fort Worth, Texas.

—(Convair Photo.)

he won't be using it. The mayor says he should remove it or pay rent. Our hangar space is crowded and it will not be long before someone will come along with the cash to buy it. The mayor is afraid that if he does not remove it and pays no rent on the land the hangar will be abandoned by him ultimately and that it will take legal action to get it removed. The lease given him does not grant any right to rent the hangar. What do you think should be done?

Answer: We are going to disagree with the mayor. No matter what the original lease requirements were, the important consideration is that hangar space is needed.

There does not appear to be any good reason why such a lease could not be amended to allow the owner to use or dispose of the hangar in such a fashion that it could be allowed to remain on the airport and do the public some good. We would recommend that the owner be allowed to rent the hangar to some other airplane owner and that he pay his ground rent and maintain the building. He should also be granted the privilege of selling it to someone acceptable to the city and with whom the city will enter into a ground lease. It might even be a good solution for you to agree to handle the renting and selling as the owner's agent. Do everything you can to keep that hangar available for use.

How Not To Judge Commissioners

QUESTION: We have one of the best airport commissions in the country and my experience over the last few years has convinced me that a good airport commission is a fine type of organization for running a public airport. There is just one fly in the ointment. One of the commission members is tighter than paint on a wall. Every time something is proposed that will cost money he makes it tough to get the proposal approved. I can't say that he is against everything but he doesn't ever make things easier for me. I don't think he dislikes me personally but he surely doesn't give in on expenditures. His term expires next month and one of the councilmen asked me the other day whether I thought he ought to be reappointed. I dodged the question, but if he asks me again don't you think I ought to tell him what I think?

ANSWER: No, indeed. If you do anything we think you ought to thank the Lord you have a man like that on your commission. He's probably kept you, the airport manager, and the airport commission from making more mistakes than any other member of the commission. We never saw a public body yet that wasn't better off for having a man who wasn't afraid to look over a proposed expenditure from all sides, top and bottom before putting his stamp of approval on it. Remember he was appointed to that job as the holder of a position of trust and he takes that seriously. As a sort of watchdog of your airport treasury he is a safety valve on the enthusiasm and optimism that sometimes colors the judgment of all of us in aviation.

In your letter you said you had one of the best airport commissions in the country and he's a member of it and helped to make it so. Look back on some of the actions he's taken in which you didn't concur and consider now whether he was really right or wrong. Do that and we believe you'll tell that councilman that the commission can't get along without him. ★

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Airmen's Calendar

Dec. 16—Annual Wright Day Dinner, Aero Club of Washington, Statler Hotel, Washington, D. C.

Dec. 16—Fourteenth Wright Brothers Lecture, IAS, U. S. Chamber of Commerce Auditorium, Washington, D. C.

Jan. 5-6 — Third Annual Kansas Aerial Spray Conference, Kansas State College, Manhattan, Kansas.

Jan. 6-7—Air Show sponsored by Florida Air Pilots Association, Opa-Locka Airport, Miami, Fla.

Jan. 8-10—Miami-Havana Air Cruise for Lightplanes.

PIPER'S NEW PACER

(Continued from page 15)

features is the use of separate doors for front and rear seats. The front door is located on the right side with a conveniently-located step to facilitate entrance. The rear door on the left side not only is a convenience to rear seat occupants, but serves for easy cargo loading when desired. With the rear seat removed, the cabin offers 36 cu. ft. of cargo area.

Piper refers to the Pacer's economy as making 4-pl. private airplane travel available at a cost-per-mile comparable to bus fare for four persons. Fuel consumption at 7.7 gals. per hr. at a 125-mph. cruising speed is an important item in its economy, as is its low price which is less than $1,200 per seat. The Pacer 125 and 135 are approved for floats, skis and for use as ambulance planes. ★ ★ ★

NAVY AJ-1 attack bomber, newest and heaviest carrier aircraft, is shown landing aboard USS Coral Sea. Without its military load, it weighs over 17 tons, has a crew of three in a pressurized cockpit, and is powered by two Pratt & Whitney R-2800 piston engines in wing nacelles and a single Allison J-33 jet in the empennage, the latter having over 4,000 lbs. thrust. —(North American Photo.)

ALWAYS ON THE GO

(Continued from page 20)

was improving, and now had 1,200 ft. with broken overcast. If we had been forced to land during a period of about 15 minutes in the vicinity of Monroe, we would have been up against a very difficult situation. It just goes to show that conditions can become worse before they improve—and at the most unexpected times.

Prior to the last six months, we might have doubted that we could obtain as much utilization out of a single-engine airplane. Actually, our airplane has delivered more usefulness in transportation than we thought was practical. While the big factor in utilization is speed, we believe full utilization also demands effective use of instrumentation and instrument flying know-how. A single-engine airplane is not an instrument airplane in the full sense of the term, but instrument flying under optimum conditions and within the single-engine airplane's limitations becomes necessary on numerous occasions. These occasions include sufficient night flying to complete trips, although we do not intend to start a trip at night. There are many instances where strict adherence to daylight contact flying would handicap our use of the airplane.

This factor is one that proves diffi-

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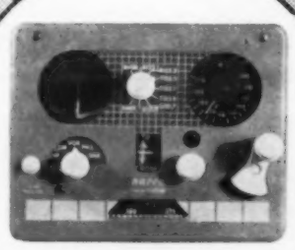

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cult in attempts by private pilots to obtain maximum utilization of their single-engine planes. As they acquire judgment from experience and instrument proficiency from a combination of adequate training and equipment, they can obtain increased utilization. A commercial pilot usually devotes many years to acquiring the kind of proficiency necessary for maximum aircraft utilization. During his training he will fly dozens of different kinds and makes of airplanes, under all kinds of conditions. This should be considered before a private pilot begins thinking himself capable of obtaining the most usefulness from his new airplane. If it is considered and if he recognizes his limitations as well as those of the airplane, we believe he will find more satisfaction in ownership and gradually develop additional proficiency and judgment.

Knowing how to make use of an airplane can also apply to commercial pilots and seasoned aircraft owners. For example, notice the tables of monthly utilization which are published with this article. While the average monthly utilization figures out to be about 48 hrs., there was one month with only 33 hrs. logged and another with 74 hrs. The latter included a trip to Florida, which added over 16 hrs. to the total. This was a pleasure trip. While cost is not a determining factor in this case, there is an interesting point involved which will interest those who are more concerned with costs. When compared with the 277 hrs. flown on other trips during the six months, this 16-hr. trip appears insignificant. From a cost standpoint, it actually is—the other 277 hrs. carried most of the operating expenses. In this manner an airplane heavily utilized in business flying can also serve as the ideal transportation for an occasional pleasure trip, since no additional investment for travel is necessary except for direct costs such as fuel which, in our own case, amounts to less than 2c per mile. If more business men made a similar analysis of their flying, we believe their airplanes would be used more—occasional pleasure trips would increase still higher their already heavy utilization of airplanes.

Doing as much cross-country flying as we do, we encounter all kinds of charges and services. Airplane storage on the road, for example, ranges from $1 per night at Duncan, Oklahoma,

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to $4 per night at Newark, New Jersey. In six months, it averages $2.50 per night and we are out of town 16 nights a month. This is storage in addition to the regular $65 monthly hangar fee at our home base. Therefore our total monthly storage bill comes to $105 per month, or about the equivalent of $2 per hr. of flying.

Landing fees on private airplanes are encountered at several cities. Newark, New Jersey, which has the highest transient storage rate, also charges us $2.50 per landing for the privilege of stopping there. In Miami, Florida, we pay $9 to drop in and leave the airplane in the hangar overnight—$5 for landing and $4 for storage. The price of gasoline varies everywhere, but for us it averages about 31 cents per gal. not including refundable taxes.

Generally speaking, airport service is improving all over the country. It is noticeably better than it was four years ago, for example. It is far better than it was fifteen years ago. The best service in our current travels is at Washington National Airport in the nation's capital. We mean airport service in general as well as at the Butler Company hangar. Washington National is without reservation the most superbly operated commercial airport in the country, bar none. Our hat is off to them and we think they deserve all possible credit.

During all this time, we have not identified the airplane we have been flying. Perhaps you would have known, even without glancing at the photograph on the title page. The performance we have discussed would identify it to most readers. Our airplane is a Model B-35 Beechcraft Bonanza.

The only extra equipment we have in our Bonanza is the following: Beechcraft air conditioner, which is necessary most of the year in the areas where we operate; Flight Research constant-speed propeller governor, which helps us do a better job of flying by holding rpm. and actually saves gasoline; directional gyro and artificial horizon, which are necessary for heavy utilization of an airplane and which are also becoming increasingly necessary for flying into industrial areas cloaked with smoke; and a Lear VHF radio receiver, VHF reception being essential for dependable communications (in addition, with it we can also hear airline traffic transmissions to towers and thus have a better understanding of local traffic conditions around busy terminals).

NORTHROP F-89 SCORPION all-weather interceptors are rolling from production lines at Hawthorne, California. Twin-jets with after-burners, they are in 600-mph. category and are radar-equipped for night and all-weather operations above 40,000 ft.
—Northrop Photo.)

Only Minor Maintenance

The only unexpected maintenance in our first six months has been minor. This included some "fixing" to our low frequency radio receiver and replacement of a burned-out bearing in our artificial horizon. As for our power plant, the Continental engine and the Beechcraft propeller have operated throughout the 293 hrs. with complete satisfaction and we expect excellent results in the future.

Our record of utilization proves, we think, that the private airplane has lots of transportation designed into it—transportation which business men everywhere are finding more and more essential in their everyday affairs.★★★

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Beech Bonanza. 350 hours. Just Relicensed. D. A. Clem, 123 Laura, Wichita, Kansas. Phone 4-5012.

Late Model 35. Low time. J. Hudson, Route 7, Highland Park Airport, Dallas, Texas, EM-2885.

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1948 Cessna 140. 90-hp. 2-way radio. Privately owned since new. Will take trade-in. $1,950. J. Hudson, Route 7, Highland Park Airport, Dallas, Texas. EMerson-2885.

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1948 Stinson Station Wagon. Company owned and maintained. Reglood. Sensenich Two Position Sky blade. Complete advanced gyro panel. 675 hours. Uses no oil. March 1950 license. Will deliver within U.S.A. Price $2975. Write States Exploration Company, Sherman, Texas.

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(Continued from page 9)

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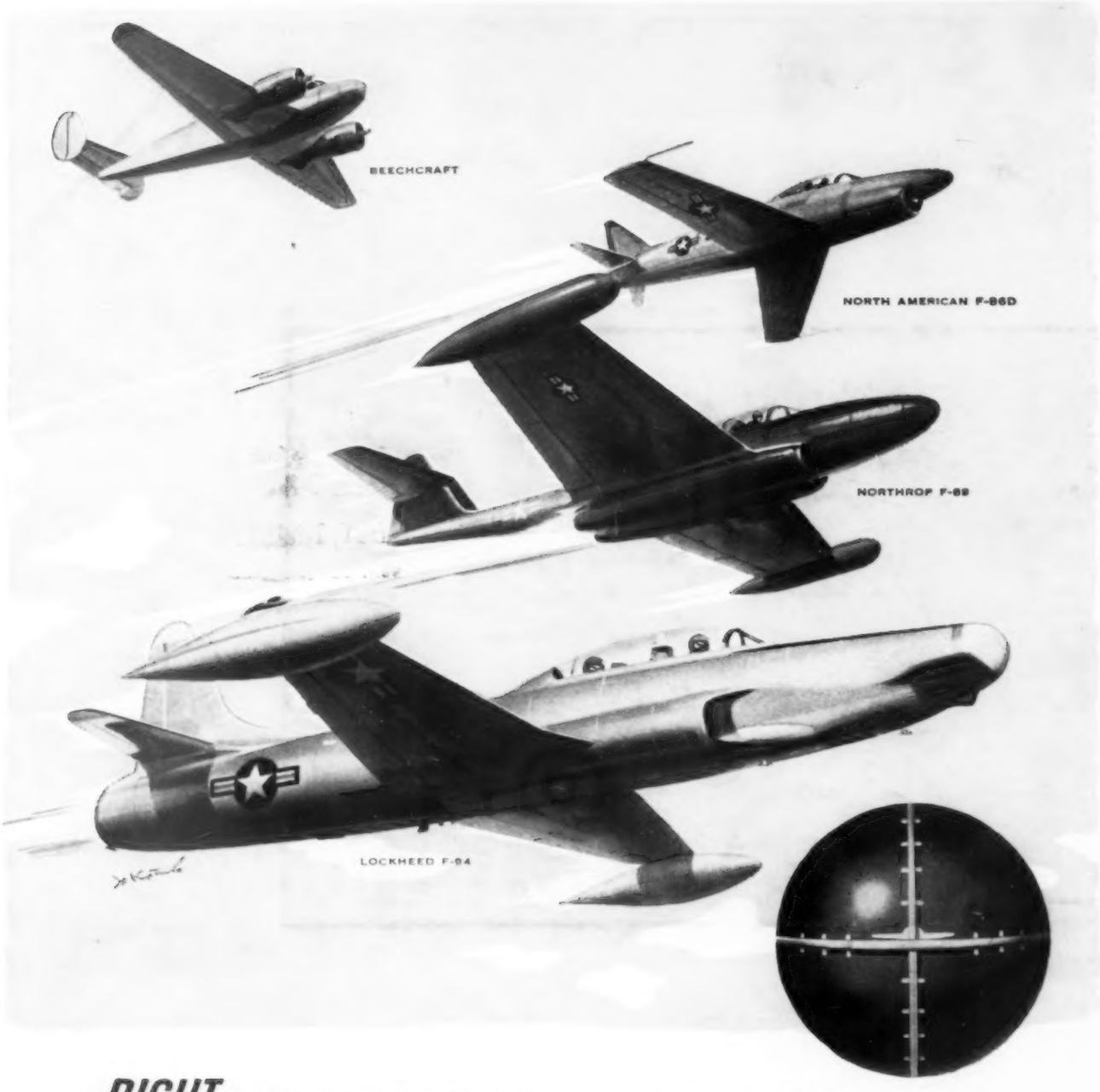

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